ORDER NO. VRD8809M164

Service Manual

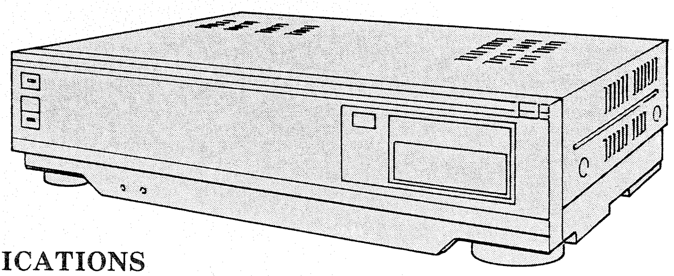
Video Cassette Recorder

Panasonic S-VHS VHS PAL 625

Hi-Fi HQ

NV-FS1B / EB

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List



SPECIFICATIONS

ITEM	SPECIFICATION	
POWER	SOURCE: 240V 50/60Hz (NV-FS1B) 220V 50/60Hz (NV-FS1EB)	
	CONSUMPTION: 34 watts	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL	
TV TUNER SYSTEM	NV-FS1B	UHF: CH21~CH69 (PAL I) 75Ω unbalanced
	NV-FS1EB	VHF I: CHE2~CHS3 VHF III: CHM1~CHE12 VHF H: CHS11~CHS41 (PAL B) 75Ω unbalanced UHF: CH21~CH69 (PAL G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4 (PAL G) 73 ± 3 dBμ, 75Ω terminated (NV-FS1B) UHF: CH36±4 (PAL G) 73^{+2}_{-3} dBμ, 75Ω terminated (NV-FS1EB)	
VIDEO	HEADS: 4 rotary heads 1 pair for SP recording, playback and trick play (L-R heads) 1 pair for LP recording, playback and trick play (L′-R′ heads)	
	INPUT: VIDEO IN Connector (BNC type) 1.0Vp-p, 75Ω terminated EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated S-VIDEO IN Connector (4P) Y: 1.0Vp-p, 75Ω unbalanced C: 0.6Vp-p, 75Ω unbalanced	
	OUTPUT: VIDEO OUT Connector (BNC type) 1.0Vp-p, 75Ω terminated EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated S-VIDEO OUT Connector (4P) Y: 1.0Vp-p, 75Ω unbalanced C: 0.6Vp-p, 75Ω unbalanced	

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal Audio) 2 rotary heads (Hi-Fi 2CH)
	INPUT: AUDIO IN Connector (Phono type) More than −10dBV (316mV), more than 50kΩ EURO AV Connector (21 pin) More than −10dBV (316mV), more than 10kΩ MICROPHONE JACK −70dBV
	OUTPUT: AUDIO OUT Connector (Phono type) −8dBV (400mV), Less than 1kΩ EURO AV Connector (21 pin) −6dBV (500mV), Less than 1kΩ HEAD PHONE Jack −30dBV, 8Ω
	TRACK: 1 track (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)
TAPE FORMAT	S-VHS, VHS Cassette tape (Tape width 12.7mm)
TAPE SPEED	SP: 23.39mm/s LP: 11.695mm/s Record/Playback Time: SP: 4 hours with 240min. type tape LP: 8 hours with 240min. type tape FF/REW Time 5.5min. with 180min. type tape
DIMENSIONS	430(W) × 109.5(H) × 357(D)mm
WEIGHT	7.5kg
STANDARD ACCESSORIES	1 pc. DIN-RE Cable 1 pc. Infra-red remote controller 2 pc. Audio Cables 1 pc. Digital Scanner Case 1 pc. Digital Scanner 1 pc. Programme sheet 1 pc. AC Mains Lead 1 pc. Cleaning Brush 1 pc. 4P Cable

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

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Central P.O. Box 288, Osaka 530-91, Japan

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference unmbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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SECTION 1
GENERAL DESCRIPTIONS

1-1. FEATURES

1. S-VHS System

This VTR uses the S-VHS format that makes it possible to obtain high resolution and high picture quality by using the high performance S-VHS video cassette tapes.

2. Flying (Rotary) Erase Head

The distracting noise ordinaly generated between successive recording has been eliminated by the flying erase head which is directly mounted on the cylinder.
Able to precisely trace the recording tracks as it erases,it assures consistently smooth,noise-free scene transition.
Insert editing onto previously recorded tapes also gains professional-level quality.

3. 1-Month Calendar Timer

The clock/timer of the VTR is programmed with the calendar up to the end of 2001, so it knows exactly what day of the week it is on any given date. Programming of as many as 8 timer recordings is possible up to one month in advance.

4. VPS (Video Programme System) (NV-FS1EB)

The Video Programme System is an extremely convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time is different from the scheduled time.

5. Auto Operation

The extremely convenient Auto Operation functions of this VTR include Auto Start and Auto Play when a recorded cassette is inserted, Auto Eject which indicates that an inserted cassette is not suitable for recording, Power-Off Eject for ejecting a cassette even with the VTR off, and Auto Rewind at the end of a tape. If the VTR On/Off Switch is pressed during the rewind mode including Auto Rewind, the VTR will eject the cassette and turn itself off when rewinding is completed.

6. Super OTR Function (One-Touch Timer Recording)

This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start or with start within 24 hours by precisely setting the starting time and ending time to the desired minute. When the recording ends, the VTR will automatically turn itself off.

7. HQ (High Quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

8. Lap Time Counter

The new Lap Time Counter is a great improvement over the approximate counter systems of conventional VTRs. It gives you an exact reading of the elapsed tape time in hours, minutes and seconds, and makes it easy to calculate the tape time left on a cassette.

9. Digital Scanner

This Digital Scanner lets you programme timer recordings by tracing the corresponding bar codes on the supplied Programming Sheet and then transmitting the data to the VTR.

10. VHS Index Search System

With the Index Search function, up to 20 addresses (places where an Index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.

11. Intro Scan Function

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another.

12. Insert Editing

Insert editing(or Insert recording) is handy for editing tapes by inserting new scenes into an already recorded video tape.

13. Hi-Fi Stereo System

14. Recording and Playback of Stereo, Bilingual and Monaural TV Programmes

The new hi-fi stereo system in combination with the built-in multiplex tuner can process audio two-channel as well as monaural signals for both recording and playback. Even if the TV set used is of the mono type, stereo or bilingual sound of recorded programmes or sound of TV programmes, being received on the VTR tuner and played back through the TV set can be reproduced via a connected hi-fi stereo system with external speakers.

15. Recording and Playback of "Simulcast" Sound

This VTR allows recording and playback of the stereo sound of TV programmes broadcast via "Simulcast" by connecting an FM tuner to the Audio Input Sockets.

16. Time Search

It is possible to locate the desired scene directly by inputting the hour,minute and second of that scene.

17. Audio Dubbing

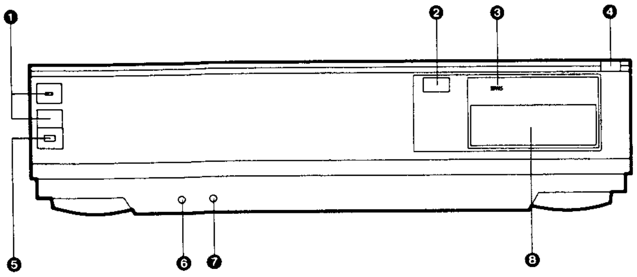
The audio dubbing function allows replacing the ordinally recorded sound with narration,background music or special sound effects.

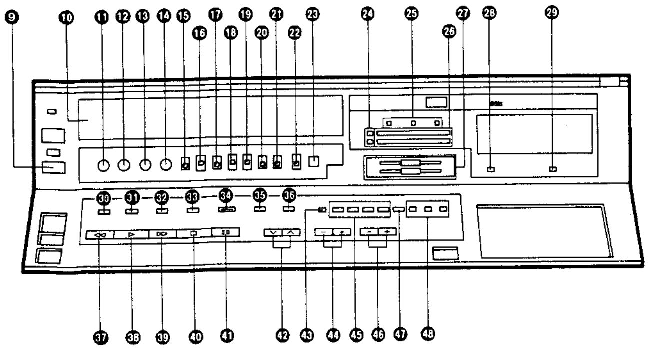
18. NICAM SYSTEM

The NICAM system is a ground-based TV service for digital stereo sound developed by the BBC.

1-2. CONTROLS AND COMPONENTS

FRONT





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❶ VTR On/Off Switch with Indicator

❷ Infra-red Remote Control Receiver

❸ S-VHS Indicator

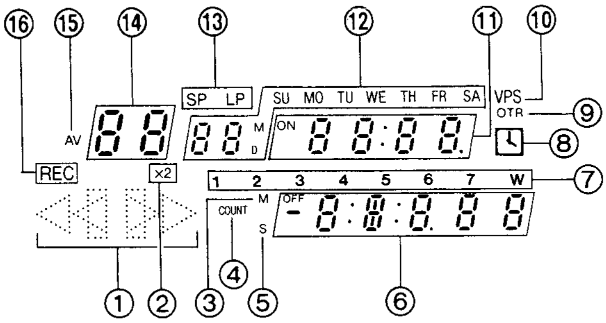
❹ Control Panel Open Button

❺ Cassette-in Indicator

❻ Headphones Socket

❼ Microphone Input Socket

❽ Multi-Function Display



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VPS
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REC
×2
1 2 3 4 5 6 7 W
⑦
COUNT
M
S
OFF
④
① ② ③ ⑤
⑥

① Tape Running Display

② Double Speed Indicator

③ Memory Indicator

④ Tape Counter Indicator

⑤ Search Indicator

⑥ Lap Time Counter

⑦ Timer Programme Number

⑧ Timer Recording Indicator

⑨ OTR Indicator

⑩ VPS Indicator (NV-FS1EB)

⑪ Clock Display

⑫ Date Display

⑬ Tape Speed Indicator

⑭ Channel Display

⑮ Euro AV Indicator

⑯ Recording Indicator

❾ Eject Button (▲)

❿ Cassette Compartment

⓫ Headphones Output Level Control

⓬ Tracking Control

⑬ Slow Tracking Control

⑭ Picture Sharpness Control

⑮ S-VHS Selector

AUTO: The recording will be made in the S-VHS format.
•The S-VHS Indicator lights up.

OFF: The recording will be made in the VHS format.
•The S-VHS indicator does not light up.
(It is possible to make a recording on an S-VHS cassette tape in the VHS format, for example, in order to play back the tape on another VHS VTR.)

⑯ Image Selector

When the Image Selector is set to "EDIT", the picture sharpness cannot be adjusted with the Picture Sharpness Control.

EDIT: For editing operations such as dubbing.

NORMAL: Set to this position for ordinary use of the VTR.

DETAIL: For playing back a pre-recorded S-VHS cassette tape. In case of a tape recorded in the VHS mode, this setting has no influence of the operation.

⑰ Tape Speed Selector

For recording either of two tape speeds can be selected. During playback the recorder selects automatically the correct speed.
Select the desired tape speed with the Tape Speed Selector before recording.

- Set to the "SP" position for normal speed.
- Set to the "LP" position for slow speed.

The corresponding indicator (SP or LP) lights up during recording and playback in the Multi-Function Display.

⑱ MPX Filter Switch

If the sound is impaired by high frequency distortion when recording from an FM tuner, the MPX Filter Switch should be set to "On" position.

⑲ Audio Level Meter Selector

⑳ Audio Rec Level Control Selector

㉑ Simul Switch

While this switch is in the "On" position, the sound portion of the TV broadcast signal will be recorded only on the "normal" sound track. And the stereo sound signal received via the FM tuner will be recorded on the hi-fi sound tracks.

㉒ Input Signal Selector

㉓ Timer Record Button

㉔ Audio Playback Mode Indicators

㉕ Audio Recording Mode Indicators

㉖ Audio Level Meter

㉗ Audio Rec Level Controls

㉘ Audio Dubbing Indicator

㉙ Insert Editing Indicator

㉚ Euro AV Button

㉛ Audio Playback Mode Selector

Audio Playback Mode Selector

Audio playback mode selector can be used to select the desired sound mode. At the every push of this button,the audio playback mode changes as follows:

→STEREO→LEFT→RIGHT→NORMAL AUDIO→

For instance,when a bilingual,stereo or mono programme is received,the audio playbacck mode selector can be selected to the desired sound mode as shown below.

	Playback of Programmes Recorded on this VTR (or another VHS Hi-Fi Video Recorder)		
	Stereo Programmes	Bilingual Programmes	Mono Programmes
STEREO	Left+Right Channels(Stereo)	CH1 from Left CH2 from Right	Mono
LEFT	Left Channel	Channel 1 (Main)	Mono
RIGHT	Right Channel	Channel 2 (Sub)	Mono
NORMAL	Mono	Channel 1 (Main)	Mono

	Playback of Programmes Recorded on a Conventional VHS Stereo Video Recorder	
	Stereo Programmes	Bilingual Programmes
STEREO	———	———
LEFT	———	———
RIGHT	———	———
NORMAL	Left+Right Mixed	CH1+CH2 Mixed

㉜ Audio Dubbing Button

㉝ Insert Editing Button

㉞ Record Button (●)

㉟ Memory/Search Button

㊱ Reset/Index Button

㊲ Rewind ◄◄/Review [◄◄] Button

㊳ Play Button (►)

㊴ Fast Forward ►►/Cue [►►] Button

㊵ Stop Button (■)

㊶ Pause/Still Button (❚❚)

㊷ Channel Selection Up and Down Buttons

㊸ Clock Button

㊹ OTR On Buttons

㊺ Timer Controls

㊻ OTR Off Buttons

㊼ VPS Button (NV-FS1EB)

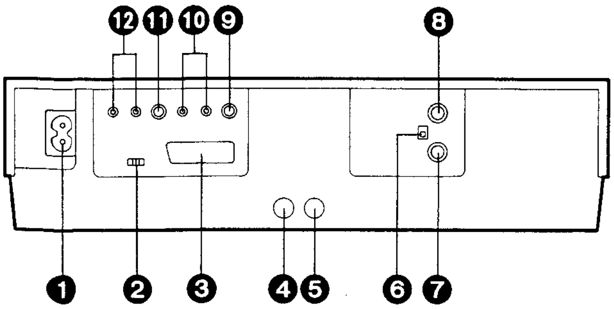
The VPS Button can be used which the TV programmes scheduled for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time is different from the scheduled time.

㊽ Tuner Set-up Controls

BAND / MODEL	VHF			UHF
	I	III	H	U
NV-FS1EB	E2-S3	M1-E12	U1-U10 (S11-S20) S21-S41	21-69
NV-FS1B	——	——	——	21-69

The tuner in the VTR can be preset with up to 99 stations.

REAR



❶ AC Mains Lead Socket

❷ Filter/Test Signal Switch

When the video signal(composite sig.) is supplied to line input ,set the filter to ON or OFF.This Filter uses for reducing the colour interference noise that could be occurred while the composite video signal separetes by inner luminance/chrominance sepatator(using comb filter) circuit into luminance sig. and chrominance sig. and especially colour interference noise would be just appeared when the colour information is completely changed.When the filter is set to on,the inner 4.43MHz chrominance trap is worked and the colour interference noise is reduced.Anyway the frequency response of luminance sig. in S–VHS mode becomes approx.0Hz – 5MHz.The luminance sig. around 4.43MHz would be lost when setting the filter to on and of course these information could not be realized in output video signal.As a result you should choose the your favourite picture condition by setting the filter to on or off.

❸ Euro AV Socket

❹ S-Video Input Socket

❺ S-Video Output Socket

❻ RF Signal Level Switch

❼ RF Input Socket

❽ RF Output Socket

❾ Video Output Socket

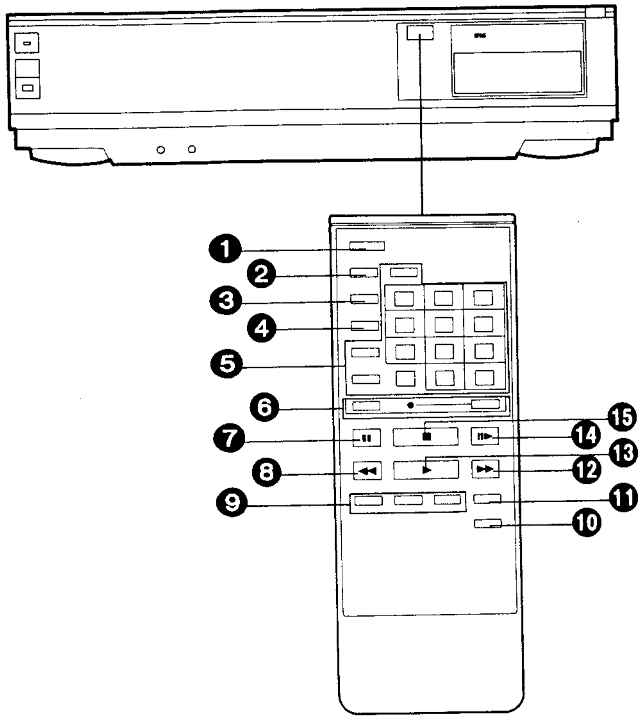
❿ Audio Output Sockets

⓫ Video Input Socket

⓬ Audio Input Sockets

1-3. PROGRAMMABLE REMOTE CONTROLLER AND DIGITAL SCANNER

Part Number: VEQ0836 (NV-FS1EB)
VEQ0839 (NV-FS1B)



❶ **VTR On/Off Button**

❷ **Audio Select Button**

❸ **Memory/Search Button**

❹ **Reset/Index Button**

❺ **Timer Recording & Programme Position Selector Buttons**

❻ **Record Buttons (●)**

❼ **Pause/Still Button (❚❚)**

❽ **Rewind ◀◀/Review ⏪ Button**

❾ **Slow Buttons**

When this button is pressed, the unit will play back the tape in slow–motion at 1/10 of normal speed. The slow playback speed can be varied between 1/25 and 1/5 of normal speed by using the "+" and "–" Buttons.

❿ **Intro Scan Button**

⓫ **Double Speed Playback Button (×2)**

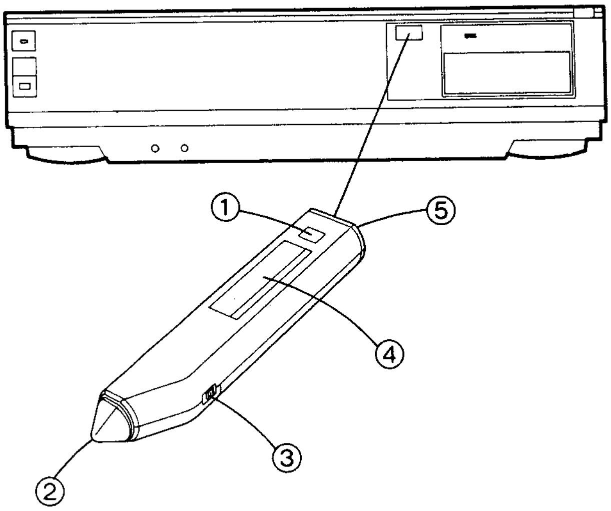
⓬ **Fast Forward ▶▶/Cue ⏩ Button**

⓭ **Play Button (▶)**

⓮ **Still Advance Button (❚❚▶)**

⓯ **Stop Button (■)**

Part Number: VEQ0691 (NV-FS1EB)
VEQ0692 (NV-FS1B)

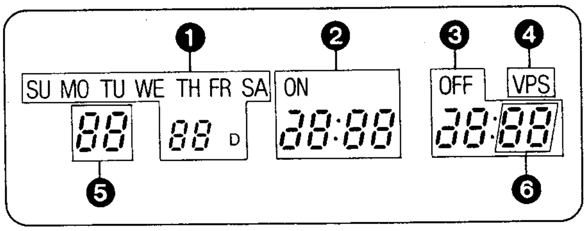


① **Transmit Button**

② **Bar Code Reading Section**

③ **Digital Scanner On/Off Switch**

④ **Bar Code Reader Display**



❶ Date Display

❷ Start Time Display

❸ End Time Display

❹ VPS Indicator (NV-FS1EB)

❺ Channel Display

❻ Check Indicator

⑤ **Transmitting Section**

How to Operate the Digital Scanner

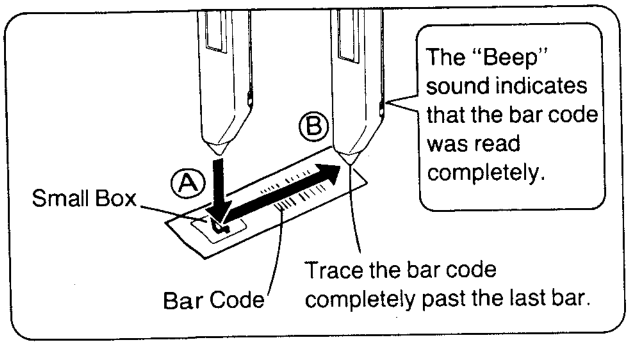
Set the Digital Scanner On/Off Switch to "ON".

- If no operation is performed for more than 25 seconds, the scanner will automatically switch over to the power-saving standby condition and the lamp will go off. (In this case, if bar codes have already been read but not yet transmitted to the VTR, the data will be cancelled.)
- When the Digital Scanner On/Off Switch is set to "ON" but the lamp is not lit, set the switch to "OFF" and then to "ON" again.

Tracking the Bar Codes

Ⓐ Place the Digital Scanner vertically on the Small Box.

Ⓑ Trace the bar code quickly in the direction of the arrow.



The "Beep" sound indicates that the bar code was read completely.

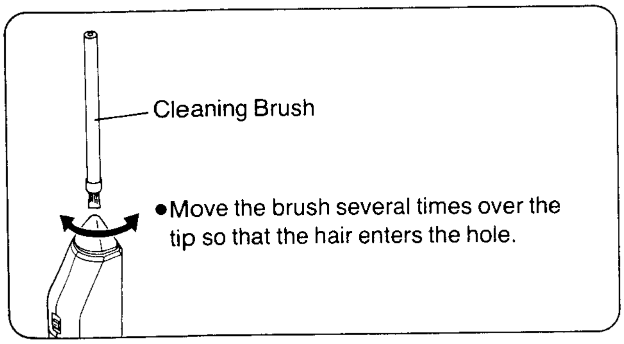
Trace the bar code completely past the last bar.

Multi-Language instruction Stickers

To facilitate the use of the Programming Sheet, select the stickers with the instructions in your own language and attach them on the Einglish indications on the Programming Sheet.

Cleaning Brush for the Digital Scanner

If the sensor in the tip of the Digital Scanner becomes clogged with dirt, it may become impossible to read the bar codes. Clean the tip from time to time with the supplied brush as illustrated below.
Keep this brush in the storage case of the Digital Scanner.



- Move the brush several times over the tip so that the hair enters the hole.

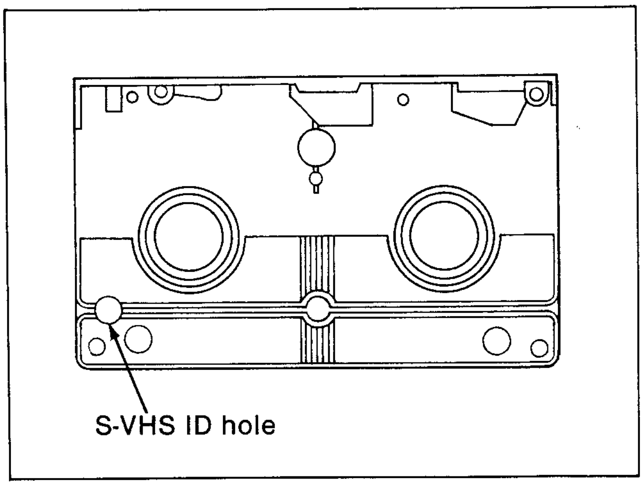
- Treat the Programming Sheet with care. If the sheet gets dirty or scratched, the bar code reading may become impossible.
- Protect the Digital Scanner from strong shocks and vibration. Keep it away from water and places with high temperature and humidity.
- If the bar code is traced slowly, it cannot be read correctly.
- When there is no "Beep" sound, the reading of the bar code is incomplete. Trace the bar code again.
- When using the Programming Sheet, put it on flat surface. Reading the bar codes while holding it in your hand or bending it, may result in incorrect operation.
- Do not deviate from the bar code, nor stop tracing halfway.
- Do not slant the scanner to trace the bar code.

1-4. S-VHS FORMAT

The S–VHS video format is the new video system that fulfills the exceedingly high demends and expectations of today's video information age.
It is newly developed based on the VHS video format established throughout the world for home use and employs a weath of latest technology to provide higher resolution and picture quality.
The enable the S–VHS format to realize truly epoch–making improvements in overall picture quality and clarity.
This S–VHS VTR allows high picture quality recording and playback by using the S–VHS video cassette tapes.

1–4–1.How to make the recording and playback in the S–VHS format

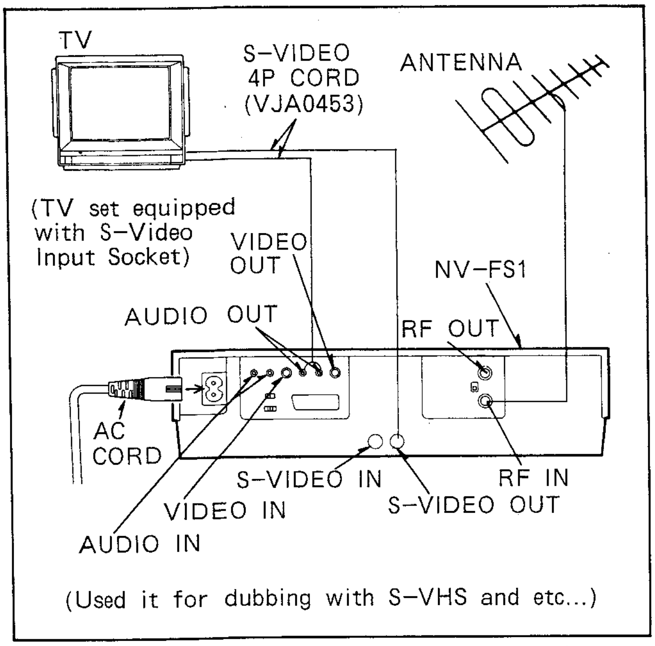
When making a recording in the S–VHS format,the high performance S–VHS Video Cassette Tapes should be used.
The S–VHS video cassette tape has a S–VHS ID Hole in order to distinguish between S–VHS and VHS.



S–VHS Cassette Tape

[Connection to a TV set with S–VHS Socket]

Connect the S–Video Output Socket on the VTR with the S–Video Input Socket on the TV set,and the Audio Output Sockets on the VTR with the Audio Input Sockets on the TV set.


TV
S-VIDEO 4P CORD (VJA0453)
ANTENNA
(TV set equipped with S-Video Input Socket)
VIDEO OUT
NV-FS1
AUDIO OUT
RF OUT
AC CORD
S-VIDEO IN
RF IN
VIDEO IN
S-VIDEO OUT
AUDIO IN

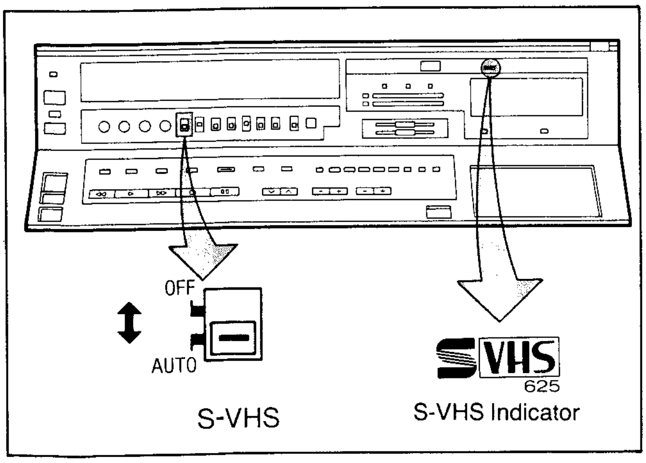
(Used it for dubbing with S-VHS and etc...)

Connection to a TV set with S-Video Socket

NOTE:
The conventional video jack of VTRs output(input) a combination of the luminance signal(Y) and colour signal(C) which are recorded on the video tape.The new S(Separate)-Video Socket allows separate transmission of these two signals to a TV set or separate input of these two signals in order to obtain clearer picture.

[Recording of S-VHS]

Set the S-VHS selector switch to "AUTO" position and record the video signal through the S-VHS circuit by using the S-VHS cassette tape.


OFF
AUTO
S-VHS
SVHS
625
S-VHS Indicator

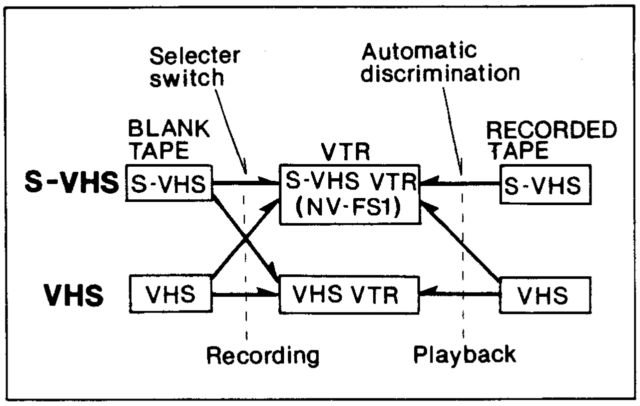
NOTE:
When setting the S-VHS selector switch to OFF position,it is possible to record in the VHS format using the S-VHS cassette tape.

[Playback of S-VHS]

Cassette tapes recorded in the S-VHS format are automatically played back in the S-VHS format and tapes recorded in the VHS format are automatically played back in the VHS format.
So that it is not necessary to operate the S-VHS select switch.
When an S-VHS tape which was recorded in the VHS format is played back,the S-VHS indicator does not light up.
The connection with the S-Video Cable can be used for playback of a tape that was recorded in the conventional VHS system.The "S" in the "S-Video Socket" stands for "SEPARATED Y/C" not for "S-VHS".

NOTE:
When a tape which was recorded in the S-VHS format is played back on a conventional VHS VTR,it is not possible to obtain playback picture.

1-4-2.Compatibility of VTR and Tapes


Selecter switch
Automatic discrimination
BLANK TAPE
VTR
RECORDED TAPE
S-VHS
S-VHS
S-VHS VTR (NV-FS1)
S-VHS
VHS
VHS
VHS VTR
VHS
Recording
Playback

During recording

Video deck Video tape	S-VHS video	VHS video
S-VHS tape	To S-VHS automatically (VHS mode if so selected)	VHS mode
VHS tape	VHS mode	VHS mode

During playback

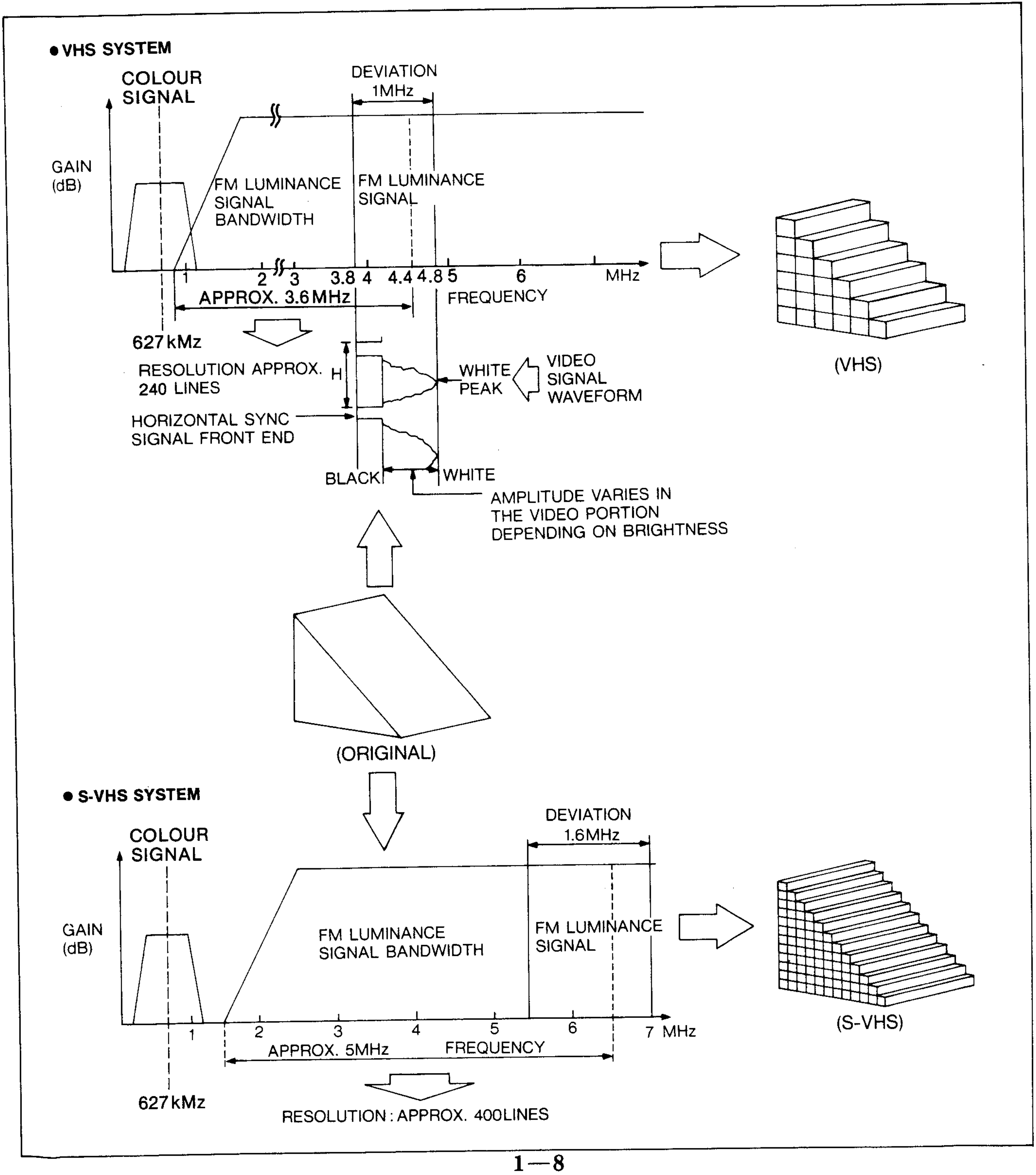
Video deck Video tape	S-VHS video	VHS video
S-VHS tape recorded in S-VHS mode	S-VHS mode	Not possible
S-VHS tape recorded in VHS mode	VHS mode	VHS mode
VHS tape recorded in VHS mode	VHS mode	VHS mode

1-4-3.Principle of S-VHS(Super VHS)

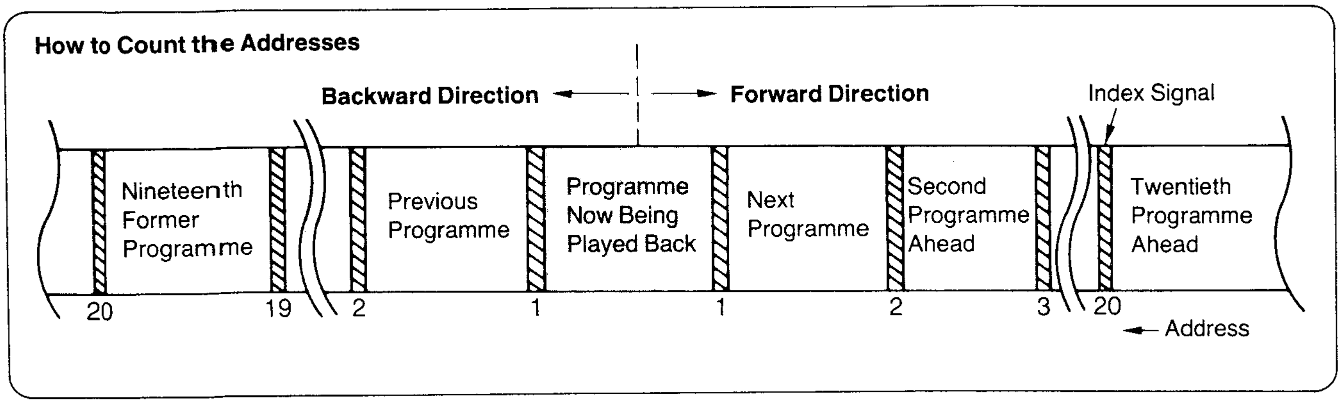
[More than 400 lines of horizontal resolution]

The super VHS(S-VHS) has been designed to satisfy the demand of high picture quality.
The conventional VHS format offers about 240 lines of horizontal resolusion, however S-VHS technology increases this specification to well over 400 lines by raising the FM carrier frequency of the luminance signal from between 3.8MHz and 4.8MHz to between 5.4MHz and 7.0MHz.

The result in performance is breath-taking detail and clarity.A 210% increase in peak white level enhances the picture quality even more, and highly faithful reproduction of detail.
When resolution increases,normally noise does too,S-VHS technology solve this problem by broadening the luminance signal handwidth (frequency deviation) from 1MHz to 1.6MHz,thus improving the S/N ratio.
The non-linear sub-emphasis system further reduces noise by varying the emphasis according to the amplitude of the incoming signal,making it possible to apply the optimum amount of emphasis to signals of finely divided level.

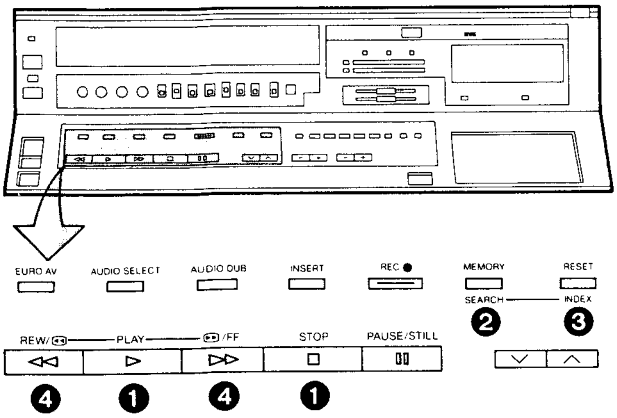

● VHS SYSTEM
COLOUR SIGNAL
DEVIATION
1MHz
GAIN (dB)
FM LUMINANCE SIGNAL BANDWIDTH
FM LUMINANCE SIGNAL
1
2
3
3.8
4
4.4
4.8
5
6
MHz
APPROX. 3.6MHz
FREQUENCY
627kMz
RESOLUTION APPROX. 240 LINES
H
HORIZONTAL SYNC SIGNAL FRONT END
WHITE PEAK
VIDEO SIGNAL WAVEFORM
BLACK
WHITE
AMPLITUDE VARIES IN THE VIDEO PORTION DEPENDING ON BRIGHTNESS
(VHS)
(ORIGINAL)
● S-VHS SYSTEM
COLOUR SIGNAL
DEVIATION
1.6MHz
GAIN (dB)
FM LUMINANCE SIGNAL BANDWIDTH
FM LUMINANCE SIGNAL
1
2
3
4
5
6
7 MHz
APPROX. 5MHz
FREQUENCY
627kMz
RESOLUTION : APPROX. 400LINES
(S-VHS)

1-5. VHS INDEX SEARCH SYSTEM


How to Count the Addresses

Backward Direction
Forward Direction
Index Signal
Nineteenth Former Programme
Previous Programme
Programme Now Being Played Back
Next Programme
Second Programme Ahead
Twentieth Programme Ahead
20
19
2
1
1
2
3
20
Address

With the Index Search function, up to 20 addresses (places where an index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.

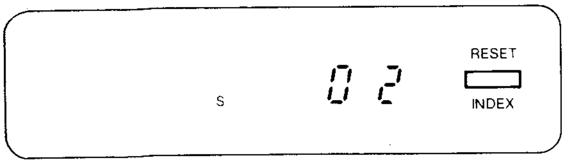

EURO AV
AUDIO SELECT
AUDIO DUB
INSERT
REC ●
MEMORY
RESET
SEARCH
INDEX
REW/⏪
PLAY
⏩/FF
STOP
PAUSE/STILL
❷
❸
❹
❶
❹
❶

A special index signal (for use of the VHS Index Search function) is automatically recorded every time the Record Button is pressed. If you want to record an additional index signal during the recording of a programme, press the Record Button again at the desired point.

❶ Press the Play Button (▶) or Stop Button (■).

❷ Press the Memory/Search Button twice.
- The indication "S" appears on the Multi-Function Display.

❸ Repeatedly press the Reset/Index Button to select the desired address.
The number of the selected address is shown on the Multi-Function Display.


S
02
RESET
INDEX

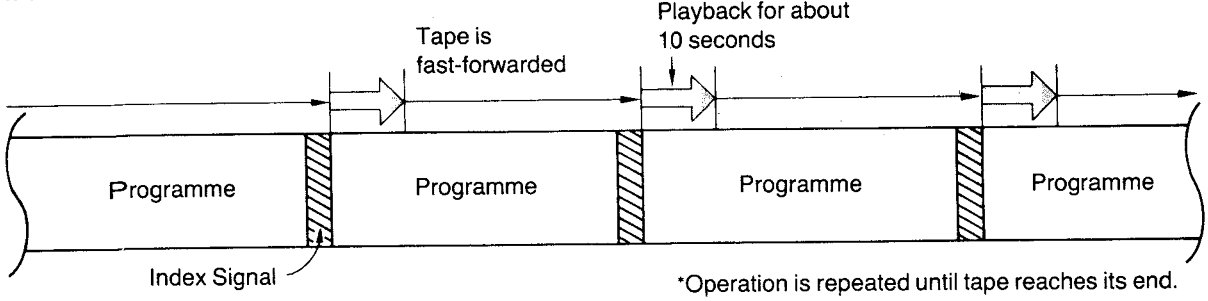
❹ Press the Rewind ◀◀/Review ⏪ or Fast Forward ▶▶/Cue ⏩ Button to start the VHS Index Search function (the VTR will switch to the rewind or fast-forward mode).

- Every time an index signal (address) is skipped the number in the Address Indication decreases by one.
- When the preset address is reached, the Tape Counter Indication will appear in place of the Address Indication, and the normal playback will start.
- To abort the Index Search function midway, press the Play or the Stop Button.

- If the recording is stopped temporarily by pressing the Pause Button and is later resumed, no index signal will be recorded at that position.
- It is impossible to record only index signals onto a tape that has already been recorded.
- If a tape position without any recording is passed during the Index Search function, that position may be counted as an address.
- The Index Search function can only count the addresses correctly, if the index signals are spaced at least 2 minutes in the SP mode and 5 minutes in the LP mode.
- If the Index Search function is started extremely close to the beginning of the next programme (address) or from the beginning of the tape, the first address may not be counted.

1-6. INTRO SCAN FUNCTION

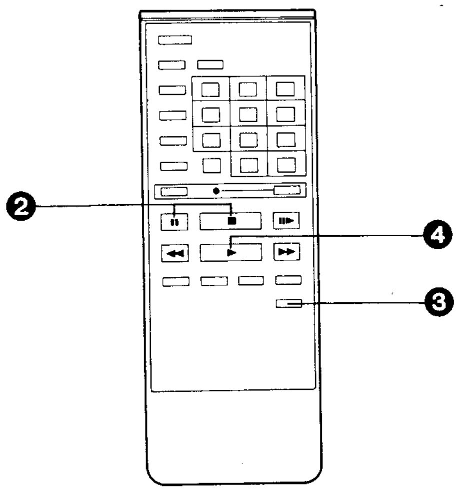
How the Intro Scan Function Works...



*Operation is repeated until tape reaches its end.

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another. This is convenient for quick checking what programmes are on a tape, or to find the desired instalment of a TV series you have recorded on a tape.

Convenient Intro Scan Operation with the Remote Controller



❶ Insert a video cassette on which index signals are recorded.

❷ Put the VTR in the stop mode or the still playback mode.

❸ Press the Intro Scan Button.
("S" mark will light up in the Multi-Function Display and the Intro Scan will start.)

❹ When the desired scene is reached, press the Play Button.

Intro Scan Operation on the VTR

① Insert a video cassette.
(Put the VTR in the stop mode.)

② Press the Memory/Search Button twice.
("S" mark appears.)

③ Press the Fast Forward ▶▶/Cue ⏩ Button.
(The Intro Scan starts.)

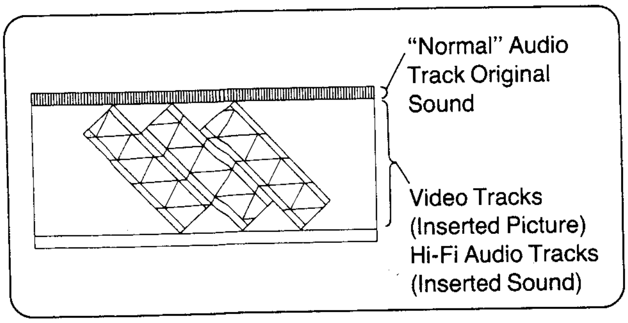
④ When the desired scene is reached, press the Play Button.

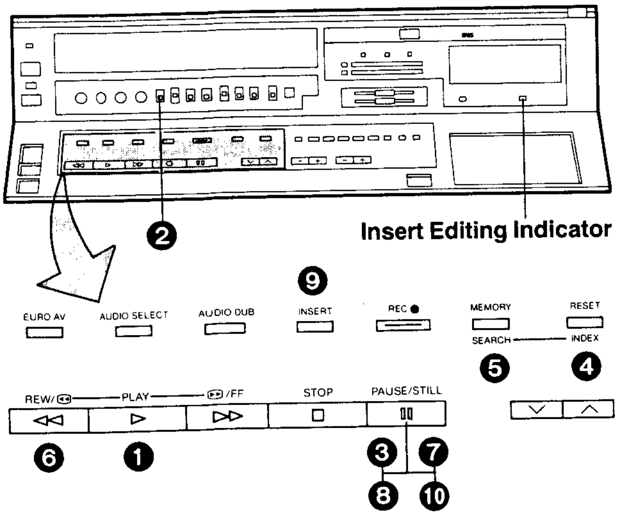
- The Intro Scan function may not be activated for the first programme recorded close to the beginning of the tape.
- During the Intro Scan, if there is a portion without any recording on the tape, the Intro Scan function will be activated at that position to play back the tape for about 10 seconds, and the Intro Scan will then continue.
- The Intro Scan function may not be activated, if the interval between programme starts is less than 5 minutes in the LP mode, or less than 2 minutes in the SP mode.
- If a portion without any recording on the tape continues for more than about 50 minutes in the SP mode, or more than about 90 minutes in the LP mode, the Intro Scan function will be cancelled and the playback will start.

1-7. INSERT EDITING

When this type of editing is done, the picture and the sound are recorded on the tape as shown below. However, if no new sound is input, only the "normal" original sound remains on the tape because the original Hi-Fi sound will always be erased during insert editing.

Video and Audio Track Recording Pattern


"Normal" Audio Track Original Sound
Video Tracks (Inserted Picture)
Hi-Fi Audio Tracks (Inserted Sound)



Preparation

- Connect the systems needed for the Insert Editing.
- Select the video playback channel on the TV set.
- Insert a video cassette with the erasure prevention tab intact.
- When performing insert editing from another VTR, set the Image Selector to "EDIT".
- Set the Input Signal Selector according to the type of Insert Editing to be performed.

"LINE/AUDIO": When inserting picture and sound from equipment connected to the Video Input Socket and the Audio Input Sockets on the rear of this VTR.

"TUNER": When inserting scenes from a TV programme.

"S-VIDEO": When inserting picture and sound from equipment connected to the S-Video Input Socket and the Audio Input Sockets on the rear of this VTR.

① Press the Play Button.

② Set the S-VHS Selector according to the S-VHS Indicator.
When the S-VHS Indicator is
lit .... Set to "AUTO".
not lit .... Set to "OFF".

③ Locate the tape position where you want the insert editing to end, and press the Pause/Still Button at that position to put the VTR into the still playback mode.

④ Press the Reset Button to reset the Tape Counter to "0:00.00".

⑤ Press the Memory/Search Button so that the "M" mark will appear.

⑥ Keep the Rewind/Review Button pressed for reverse playback at high speed and release the button when the scene, where the insert editing is to start, has been passed.

⑦ Press the Pause/Still Button to start playback, and locate the point where the insert editing is to start.

⑧ Press the Pause/Still Button at the insert editing start point to put the VTR into the still playback mode.

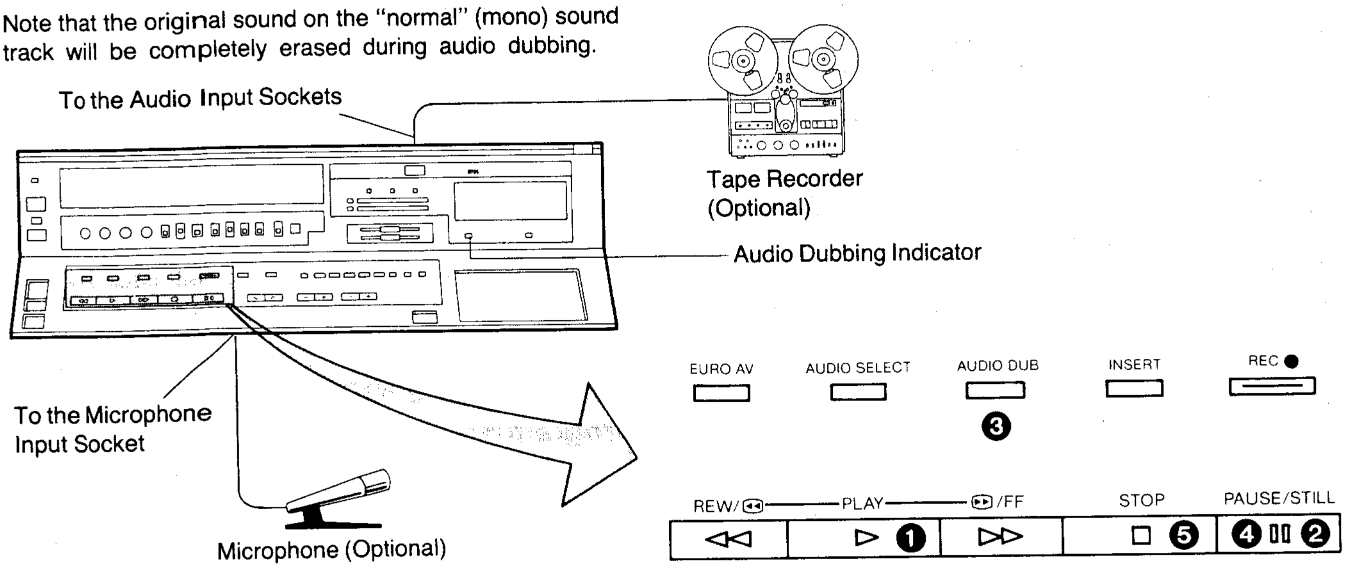
⑨ Press the Insert Button.
(The Insert Editing Indicator lights up.)

⑩ When the source VTR, from which the picture is to be inserted, is ready, press the Pause/Still Button to start the insert editing.
- The insert editing will end at the point where the Tape Counter becomes "0:00.00", and the editing VTR will stop in the still playback mode.

- It is not necessary to operate the Tape Speed Selector.
- The picture quality of an inserted part is always somewhat inferior to that of the original.
- Avoid performing insert editing repeatedly on the same part of the tape because the picture quality of that part becomes inferior.
- Do not press the Memory/Search Button during insert editing. If it is pressed, the Memory Indication "M" will disappear, and the insert editing will not end automatically at the preset editing end point.
- If the Stop Button is pressed on the editing VTR to finish the insert editing, noise bars will later be visible at that position of the tape.
- The inserted picture may contain slight colour noise or colour may be unstable.

1-8. AUDIO DUBBING

Note that the original sound on the "normal" (mono) sound track will be completely erased during audio dubbing.


To the Audio Input Sockets
Tape Recorder (Optional)
Audio Dubbing Indicator
To the Microphone Input Socket
Microphone (Optional)
EURO AV
AUDIO SELECT
AUDIO DUB
INSERT
REC ●
❸
REW/
PLAY
/FF
STOP
PAUSE/STILL
❶
❺
❹
❷

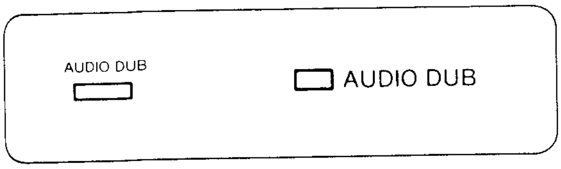
Preparation

- •Set the Input Signal Selector to "Line/Audio".
- •Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- •Reset the Tape Counter to "0:00.00".
- •Turn the TV set on and select the video playback channel.
- •Set the Audio Rec Level Control Selector to "AGC".
- •Select the "normal" (mono) sound track by repeatedly pressing the Audio Playback Mode Selector until the Audio Playback Mode Indicators "Left" and "Right" are not lit.

❶ Press the Play Button (▶) to look for the point where you want to start the audio dubbing.

❷ Press the Pause/Still Button (❚❚) at the exact point where you want to start the audio dubbing.

❸ Press the Audio Dubbing Button (the indicator will light up).


AUDIO DUB
AUDIO DUB

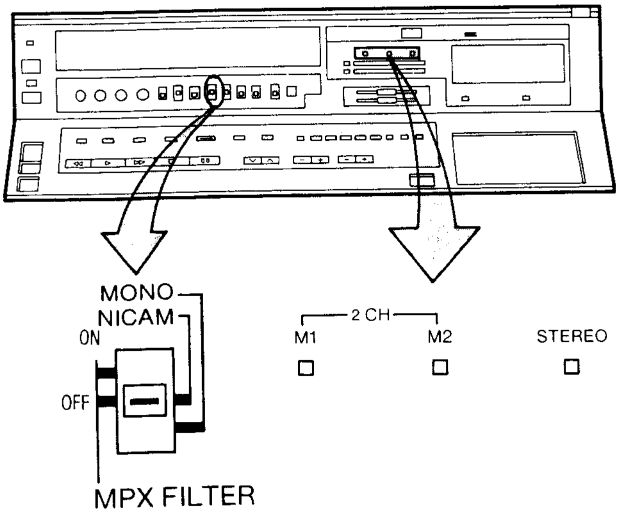
❹ Press the Pause/Still Button (❚❚) once again to release the tape from pause, and at the same time start the operation of the audio source. The audio dubbing will start.

❺ Press the Stop Button (■) to stop the audio dubbing.

- •Sound recorded by using the audio dubbing function is recorded on the "normal" audio track (always in mono).
- •For playback, select the "normal" (mono) sound track by repeatedly pressing the Audio Playback Mode Selector until the Audio Playback Mode Indicators "Left" and "Right" are not lit.
- •When a microphone is used for dubbing, do not place it near the speaker of your TV to prevent howling noise (acoustic feedback).
- •If the erasure prevention tab of the cassette is missing, no audio dubbing can be made.

1-9. NICAM SYSTEM

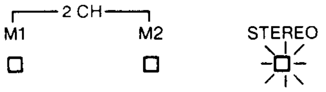
The NICAM system is a ground-based TV service for digital stereo sound developed by the BBC. To receive NICAM broadcasts, the NV-FS1 incorporates a NICAM decoder. When a stereo, dual-soundtrack or monaural NICAM programme is being received, the indicators light to inform you of the type of broadcasts. The NICAM programmes are always accompanied by standard broadcasts and you can select the desired soundtrack for recording with a single switch. NICAM soundtracks can only be recorded on the hi-fi audio track.



Preparation

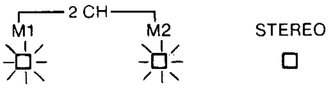
- Set the Input Signal Selector to "Tuner".

Recording of a NICAM stereo programme



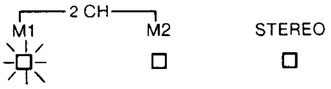
The STEREO Indicator is lit while a NICAM stereo programme is being received. To record such a programme, set the MPX Filter Switch to "NICAM". NICAM stereo sound will be recorded on the hi-fi track and the regular (standard) sound will be recorded on the normal audio track.

Recording of a NICAM dual-sound track programme



Both the M1 and M2 Indicators are lit while a NICAM dual-soundtrack programme is being received. To record such a programme; set the MPX Filter Switch to "NICAM". The M1 and M2 sounds will be recorded on the hi-fi track: M1 on the left channel and M2 on the right channel.

Recording of a NICAM monaural programme

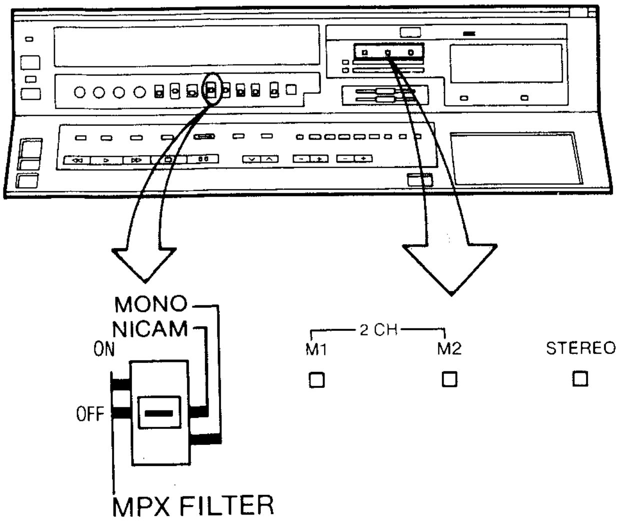


Only the M1 Indicator is lit while a NICAM monaural programme is being received. To record such a programme, set the MPX Filter Switch to "NICAM". The same monaural sound will be recorded on both channels of the hi-fi track.

Recording options according to the type of broadcasts and the setting of the MPX FILTER Switch

Type of broadcast	MPX FILTER switch position / Audio track	Normal audio track (mono)	Hi-fi audio track	
			L	R
Regular broadcast (standard audio)	Either position	Standard audio	Standard audio	Standard audio
Regular+NICAM stereo (L, R)	NICAM	Standard audio	Stereo L	Stereo R
	MONO	Standard audio	Standard audio	Standard audio
Regular+NICAM dual mono (M1, M2)	NICAM	Standard audio	M1	M2
	MONO	Standard audio	Standard audio	Standard audio
Regular+NICAM mono	NICAM	Standard audio	M1	M1
	MONO	Standard audio	Standard audio	Standard audio

Note: NICAM audio programmes cannot be recorded on the normal audio track.



MPX Filter Switch

- When a NICAM programme is being received, this switch can be used to select the desired type of sound to be recorded on the hi-fi audio track. This switch functions only when the Input Signal Selector is set to "TUNER". To record a NICAM programme, this switch must be set to "NICAM".

Note:

If NICAM broadcast signals are weak, the sound quality deteriorates remarkably. When the signals are extremely weak, the Audio Recording Mode indicator (M1 ☐ M2 ☐ STEREO ☐) goes off and the FM sound is recorded on the hi-fi track irrespective of the setting of this switch.

- If the MPX Filter Switch is intentionally set to "MONO" even though a NICAM programme is being received, the indicator(s) remain lit.
- To record the regular sound (ordinary normal sound) on the FM audio tracks when a NICAM programme is received, set the MPX Filter Switch to "MONO".
- When a NICAM programme is received and the sound is distorted due to inferior reception conditions, set the MPX Filter Switch to "MONO".

SECTION 2
ADJUSTMENT PROCEDURES

2-1. MECHANICAL ADJUSTMENT PROCEDURES

This Mechanical Chassis of this model NV-FS1B /EB is the same as the G Mechanical Chassis. Therefore please refer to the Service Manual G Mechanical Chassis (Order No. VRD8701105).

2-2. DISASSEMBLY METHOD

2-2-1. DISASSEMBLY FLOWCHART

The above flowchart describes the order of stops for removing the cabinet parts and certain printed circuit boards in order to gain access to the items needing servicing. To reassemble the unit, follow the steps in reverse order.

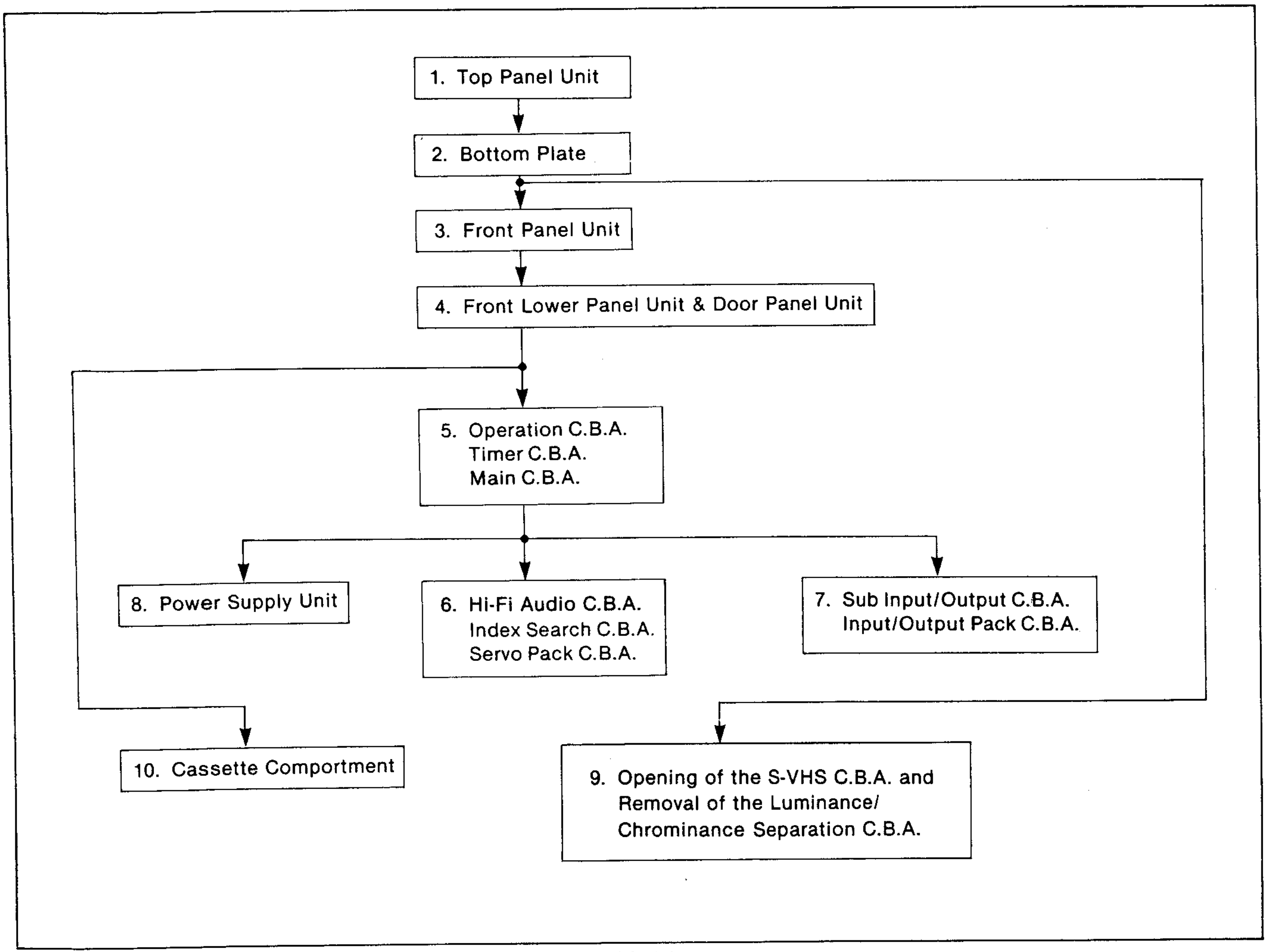

1. Top Panel Unit
2. Bottom Plate
3. Front Panel Unit
4. Front Lower Panel Unit & Door Panel Unit
5. Operation C.B.A.
Timer C.B.A.
Main C.B.A.
8. Power Supply Unit
6. Hi-Fi Audio C.B.A.
Index Search C.B.A.
Servo Pack C.B.A.
7. Sub Input/Output C.B.A.
Input/Output Pack C.B.A.
10. Cassette Comportment
9. Opening of the S-VHS C.B.A. and
Removal of the Luminance/
Chrominance Separation C.B.A.

FIG.D1

2-2-2. DETAILED DISASSEMBLY METHOD

1. Removal of the Top Panel Unit

   Unscrew 4 screws(A) on the Top Panel Unit and carefully lift the rear of case to remove.

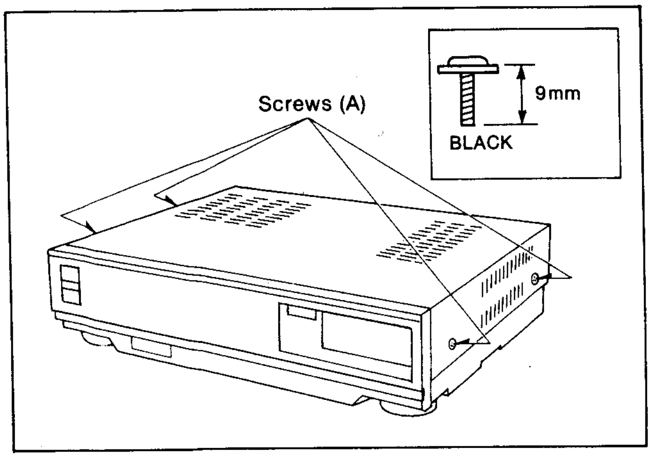

Screws (A)
9mm
BLACK

FIG.D2

2. Removal of the Bottom Plate

   Unscrew 8 screws(B) and lift off the Bottom Plate.

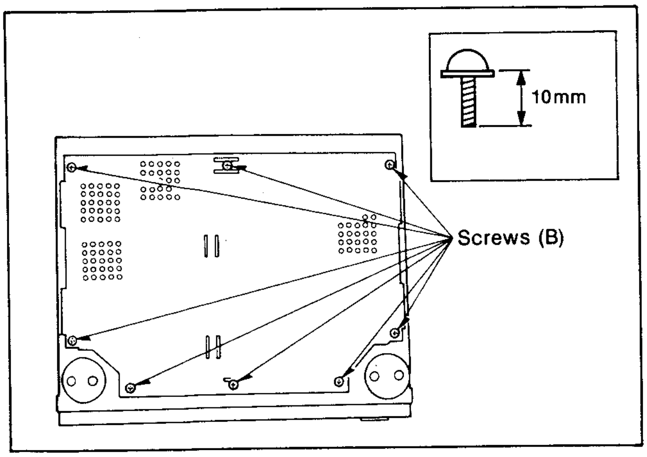

10mm
Screws (B)

FIG.D3

3. Removal of Front Panel Unit

   Open the Door Panel Unit and unscrew 2 screws(C) and then unlock 5 locking portions(D).

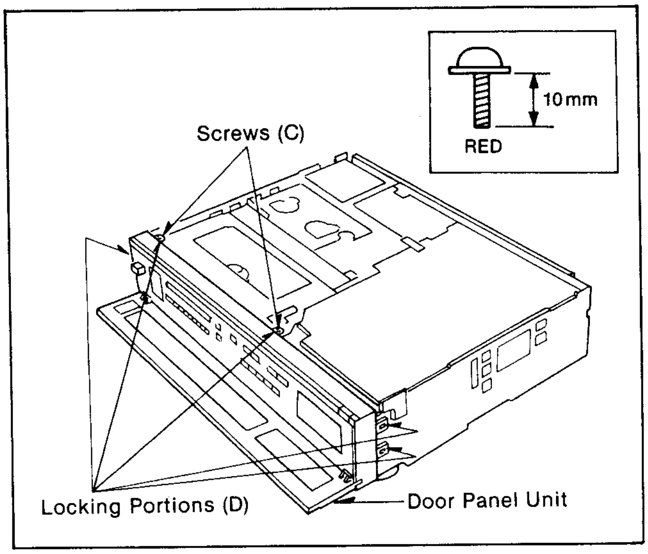

10mm
RED
Screws (C)
Locking Portions (D)
Door Panel Unit

FIG.D4

4. Removal of Front Lower Panel and Door Panel Unit

   Unscrew 6 screws(E) and then shut the Door Panel Unit.

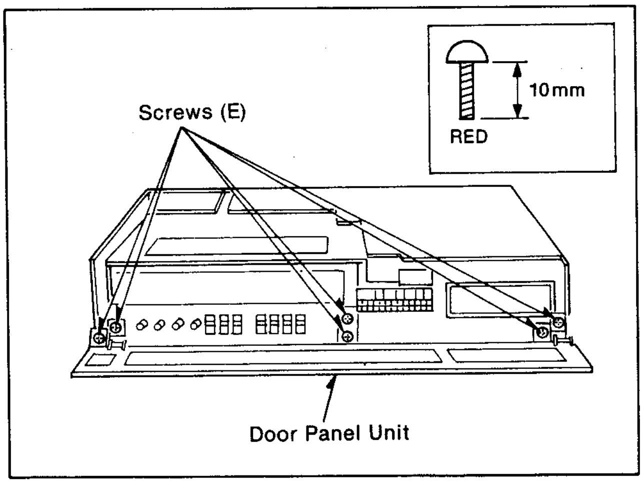

10mm
RED
Screws (E)
Door Panel Unit

FIG.D5

Unlock 3 locking portions(F).
Remove the Front Lower Panel Unit.

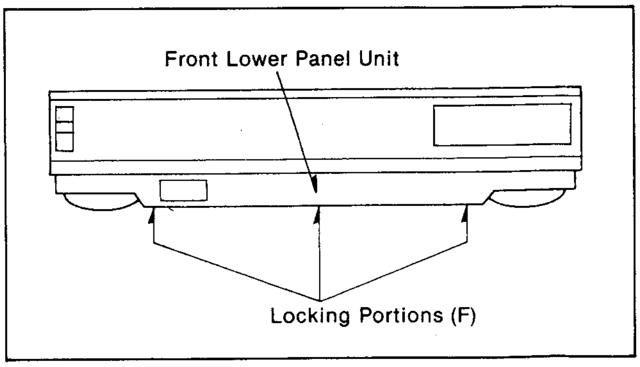

Front Lower Panel Unit
Locking Portions (F)

FIG.D6

Unlock the connector lock of P7502 on the Timer C.B.A. and remove the flexible wire.
Next, unscrew 3 screws(G) and carefully remove the Door Panel Unit.

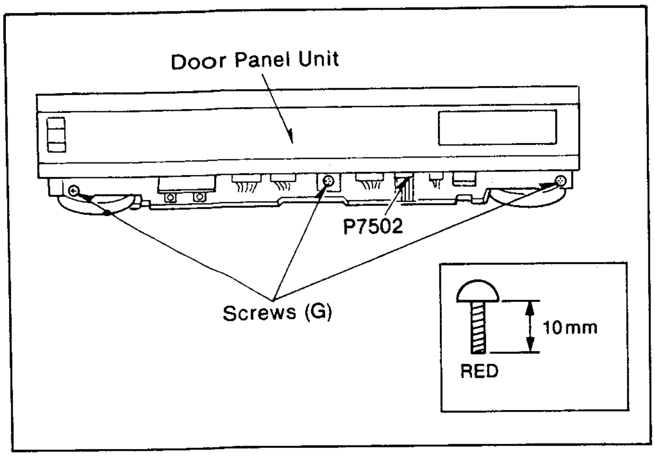

Door Panel Unit
P7502
Screws (G)
10mm
RED

FIG.D7

5. Opening of the Operation C.B.A., Timer C.B.A., Jack C.B.A. and Main C.B.A.
   Unscrew 6 screws(H) and unlock 6 locking portions(I).
   Then unlock 2 wire clampers and carefully open the Operation C.B.A., Timer C.B.A. and Jack C.B.A.

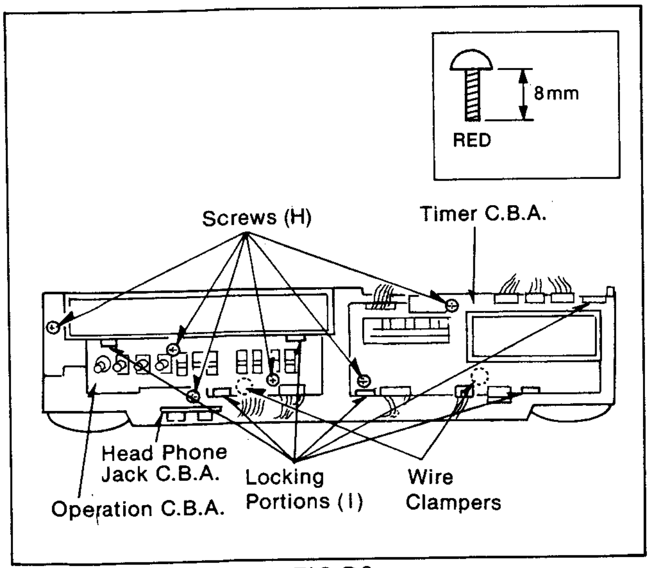

8mm
RED
Screws (H)
Timer C.B.A.
Head Phone Jack C.B.A.
Operation C.B.A.
Locking Portions (I)
Wire Clampers

FIG.D8

Unscrew 4 screws(J) on the rear panel.

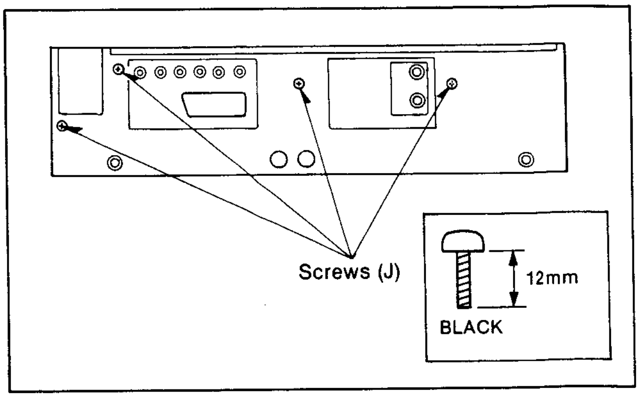

Screws (J)
12mm
BLACK

FIG.D9

Unscrew 6 screws(K) on the Main C.B.A.
And open the Main C.B.A.

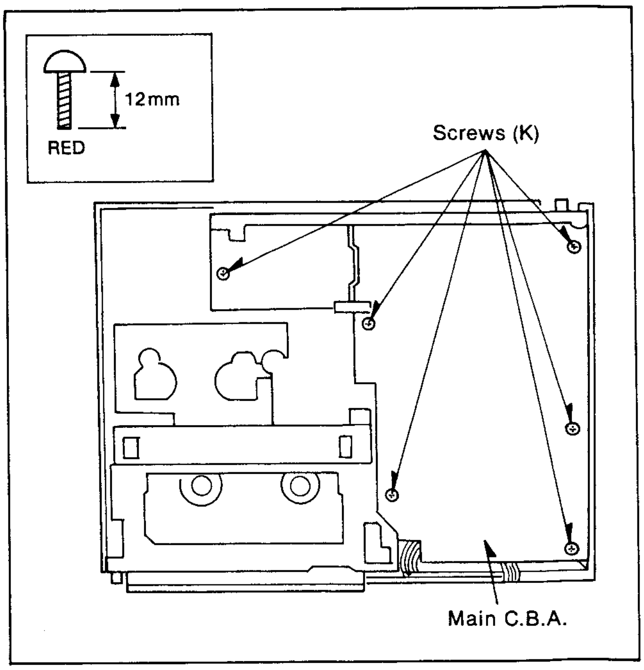

12mm
RED
Screws (K)
Main C.B.A.

FIG.D10

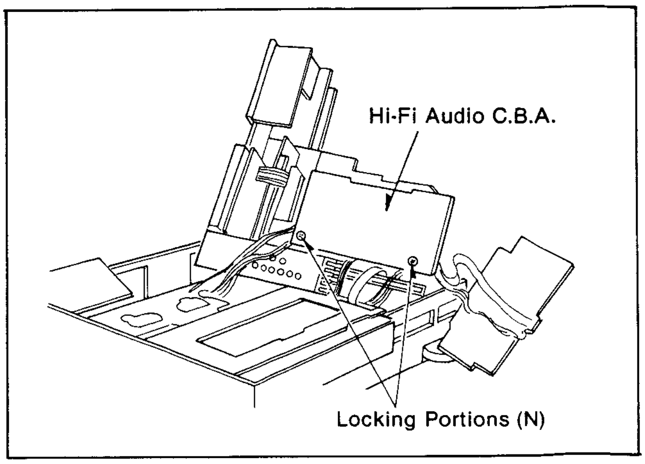

Hi-Fi Audio C.B.A.
Locking Portions (N)

FIG.D11

6. Opening of the Hi-Fi Audio C.B.A., Index Search and Servo Pack C.B.A.

Unlock 2 locking portions(N) and open up the Hi-Fi Audio C.B.A.
Next, unlock 2 locking portions(O) and open up the Index Search C.B.A.

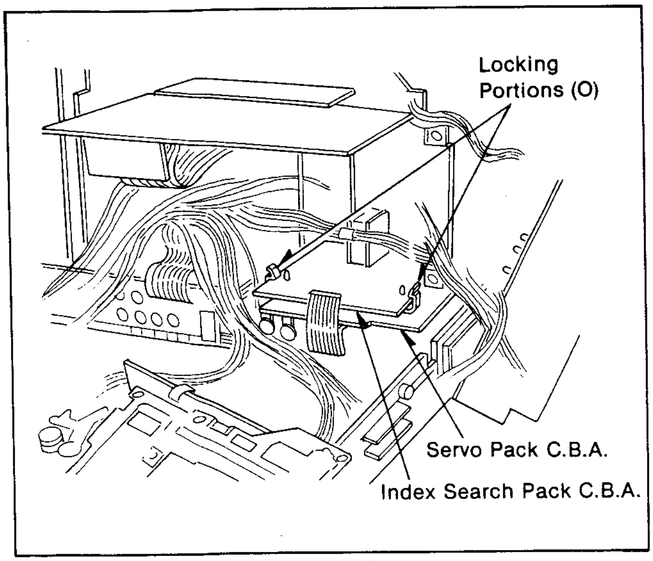

Locking Portions (O)
Servo Pack C.B.A.
Index Search Pack C.B.A.

FIG.D12

7. Opening of the Sub Input / Output C.B.A. and Input/Output Pack C.B.A.

Unlock 2 locking portions(P) and open the Sub Input/Output Pack C.B.A.

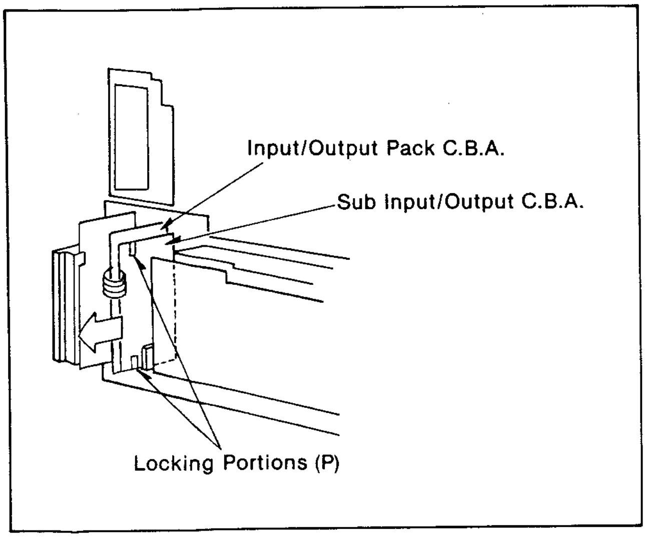

Input/Output Pack C.B.A.
Sub Input/Output C.B.A.
Locking Portions (P)

FIG.D13

8. Removal of Power Supply Unit

Remove 2 screws(Q) and take it out from the Main C.B.A.
Remove the shield case then checking can be performed.

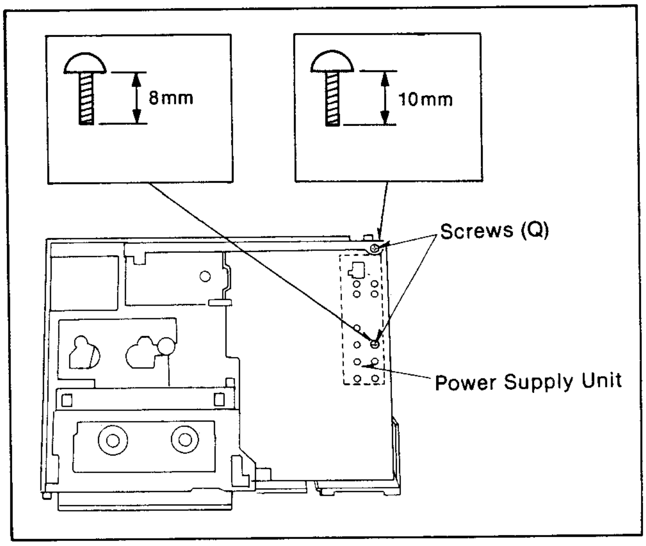

8mm
10mm
Screws (Q)
Power Supply Unit

FIG.D14

9. Opening of the S-VHS C.B.A. and removal of the Luminance/Chrominance separation C.B.A.

Unscrew 4 screws(R) and Open the S-VHS C.B.A.
Next, unscrew 3 screws(S) and remove of the luminance/chrominance separation C.B.A.

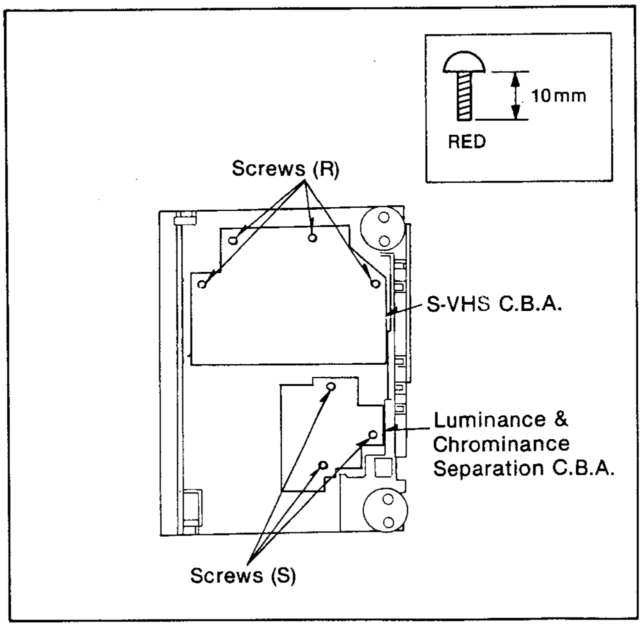

10mm
RED
Screws (R)
S-VHS C.B.A.
Luminance & Chrominance Separation C.B.A.
Screws (S)

FIG.D15

10.Removal of Cassette Compartment

Remove 2 screws(T) and slide the cassette holder until appearing 2 screws(U) by turning (clockwise) the Capstan Rotor Unit (located in the bottom side) and then remove 2 screws(U). Remove the flexible wire from connector P1503 mounted on Take-up Photo Tr C.B.A., then carefully pull out the Cassette Compartment.

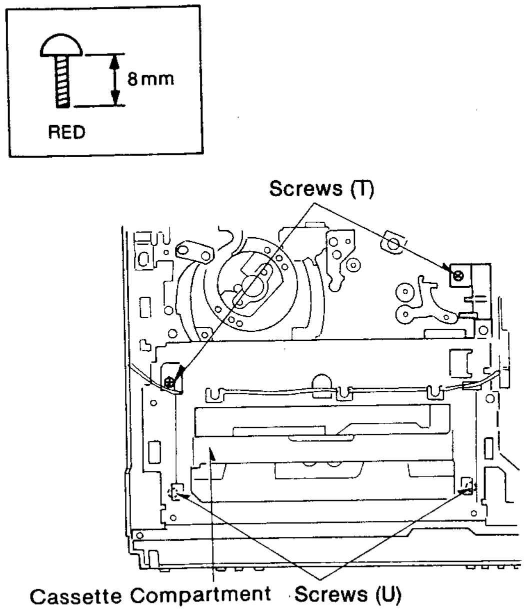

8mm
RED
Screws (T)
Cassette Compartment
Screws (U)

FIG.D16

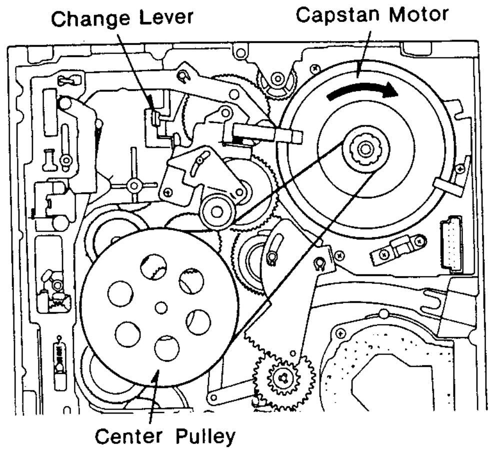

Change Lever
Capstan Motor
Center Pulley

FIG.D17

Note:
When reinstalling the Cassette Compartment, mechanical adjustment must be performed for correct working, refer to Mechanical Adjustment Procedure Section (REINSTALLATION OF CASSETTE COMPARTMENT).

2-2-3.OVERALL MECHANICAL CONDITION

The mechanism of this model is mostly engaged to the system control circuit,through the mode select switch.
Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers,gears rollers and so on.
If these parts are not fixed properly,the unit will be unloded or compulsoly stopped.
And it will result being damaged at any mechanical or electrical parts.
The overall mechanical condition(alignment) of bottom and top view are shown in FIG.D19 and FIG.D18.This mechanical adjustment is performed in "STOP" mode.

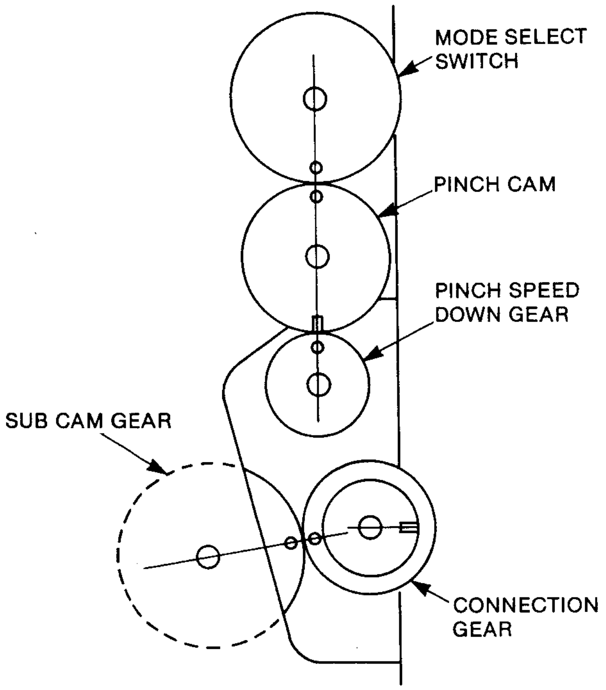

MODE SELECT SWITCH
PINCH CAM
PINCH SPEED DOWN GEAR
SUB CAM GEAR
CONNECTION GEAR

FIG.D18 Top View of Overall Mechanical Condition

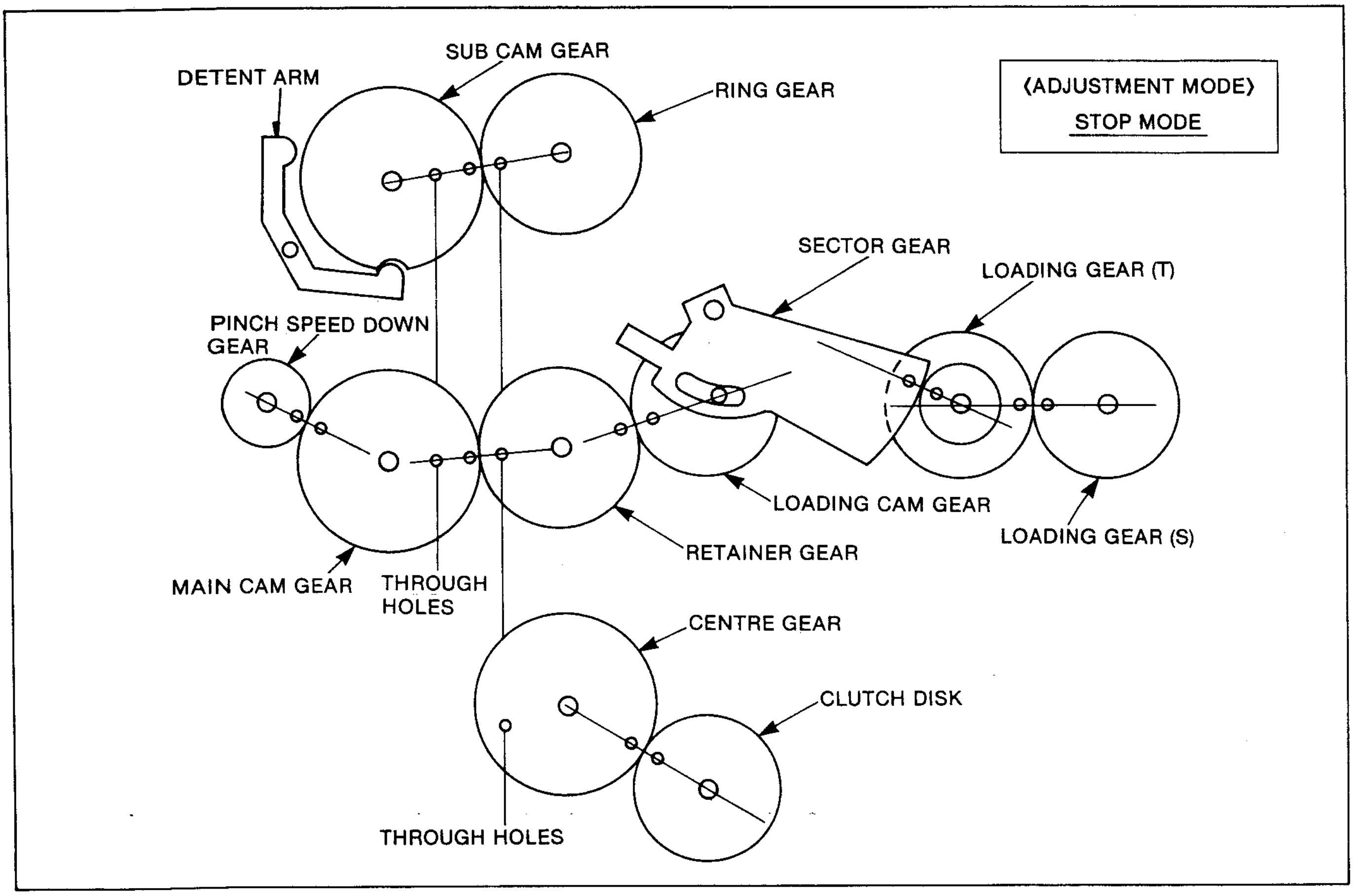

SUB CAM GEAR
DETENT ARM
RING GEAR
(ADJUSTMENT MODE)
STOP MODE
SECTOR GEAR
LOADING GEAR (T)
PINCH SPEED DOWN GEAR
LOADING CAM GEAR
LOADING GEAR (S)
RETAINER GEAR
MAIN CAM GEAR
THROUGH HOLES
CENTRE GEAR
CLUTCH DISK
THROUGH HOLES

FIG.D19 Bottom View of Overall Mechanical Condition

2-2-4.REINSTALLATION OF CASSETTE COMPARTMENT FROM STOP(FF/REW) POSITION

1. Set the mechanism condition to Stop (FF/REW) position by means of turning capstan motor (refer to 2-2-6.)
2. Remove the 2 screws (V) as shown below.

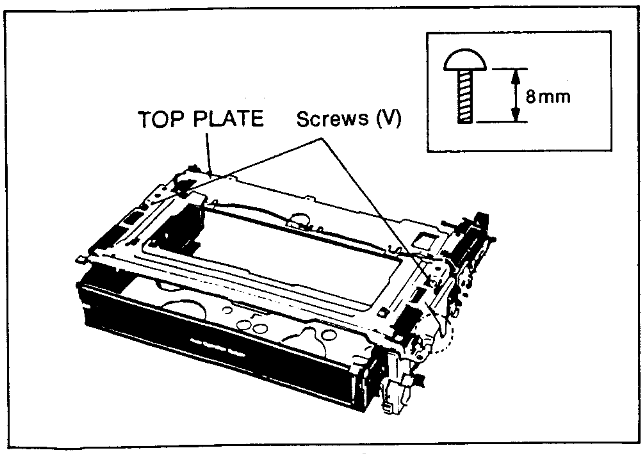

TOP PLATE
Screws (V)
8mm

FIG.D20

3. Take the top plate out.
4. Take the cassette Holder unit out as shown below.

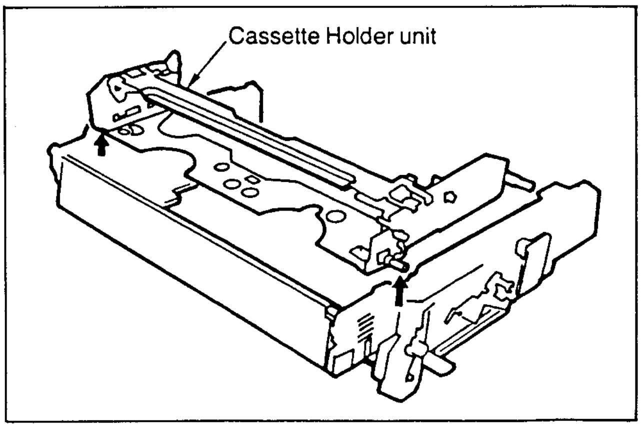

Cassette Holder unit

FIG.D21 Removal of cassette holder unit.

5. Press the sub wiper arm (W) to direction indicated by arrow so that the sub wiper arm (W) comes to cassette down position completely as shown below. and keep it.

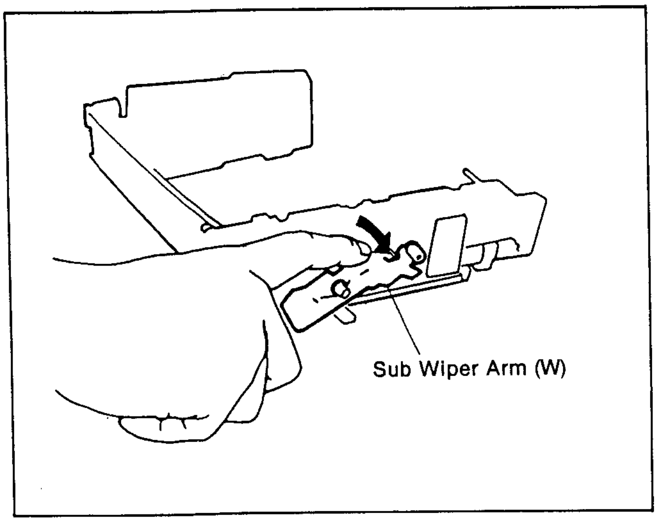

Sub Wiper Arm (W)

FIG.D22

6. Reinstall the cassette compartment (Without Cassette Holder) to chassis so that the first tip of Rack Gear A (1) comes to Marking slot of connection gear as shown in below.

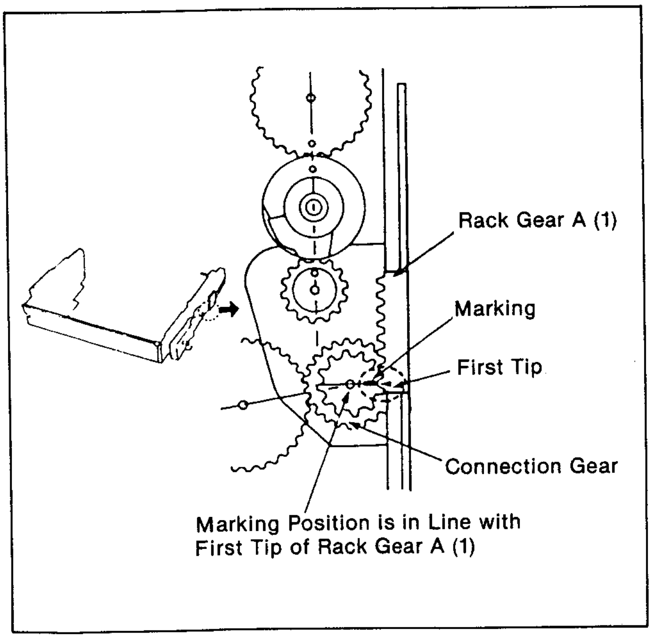

Rack Gear A (1)
Marking
First Tip
Connection Gear
Marking Position is in Line with First Tip of Rack Gear A (1)

FIG.D23

7. Tighten the 4 screws (X) as shown in below.

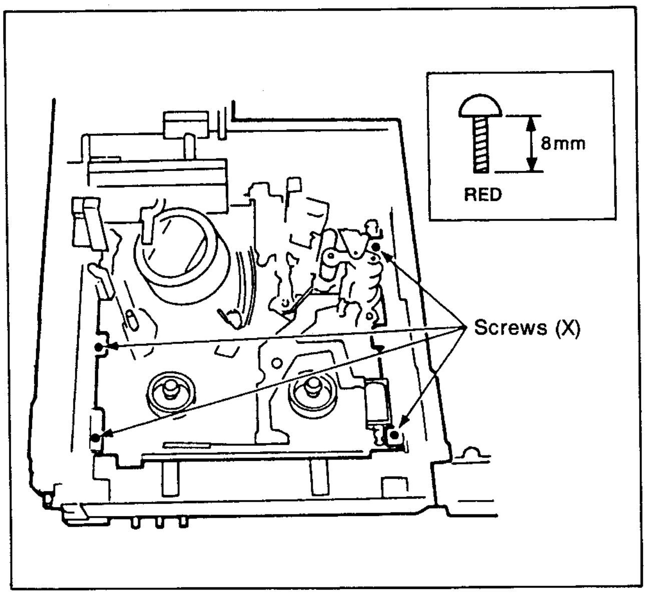

8mm
RED
Screws (X)

FIG.D24

8. Press the change lever and turn the capstan motor counter clockwise until mechanism is placed to Eject position as shown in FIG.D25.
9. Reinstall the cassette holder unit as just the reverse way of item 4, FIG.D21.
10. Reinstall the top plate as just the reverse way of item 3, FIG.D20.

2-2-5. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

(1) Take out the Main AC.
(2) Release the Change Lever by pushing it to arrow mark direction as shown in FIG.D25.
(3) Turn the capstan motor to counter clockwise slowly until the Clutch Disk is locked.
(Clutch Disk is locked once in one rotation)
(4) Release the Change Lever again when the Cluch Disk is locked.
(5) Repeat the (2) and (3) until cassette is ejected.

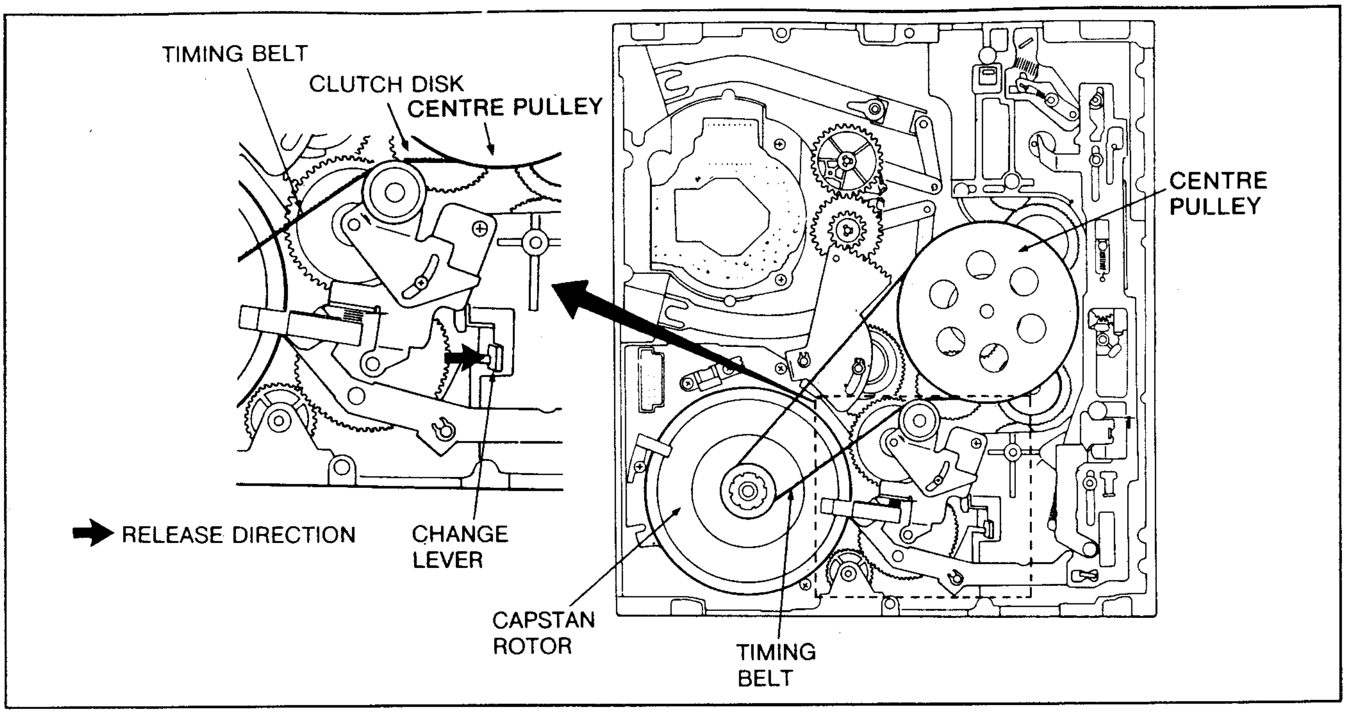


FIG.D25

2-2-6. HOW TO SEE THE MOVEMENT OF MECHANISM WITHOUT CASSETTE COMPARTMENT

Since capstan motor works as loading motor and front loading motor,Phase relationship between cassette compartment and mechanism is important, so Playback and FF/REW can not be performed even just only taking out the cassette compartment, however,if you want to see the mechanical movement without cassette compartment, it is possible as follows..

1. Take out the Main AC.
2. Take out the 5 pin flexible cable from P1503 on the cassette compartment and remove the cassette compartment from chassis.
   Set the Mechanism to stop (FF/REW) mode as following items 3.,4.,5.,6.
3. Release the change lever by pussing it to arrow mark direction as shown in FIG.D25 .
4. Turn the capstan motor to clockwise until the Clutch Disk is locked.
   (Clutch Disk is locked once in one rotation)
5. Release the change lever again when Clutch Disk is locked.
6. Repeat item 4 and 5 until mechanism come to stop (sub loading) position as shown in FIG.D26. (STOP position is same as FF/REW position, therefore, when you rotate the capstan motor in STOP position, supply or Take up reel table is rotated corresponding with direction of rotation)
7. Turn the power on.
8. Now, any operation can be performed without cassette compartment.

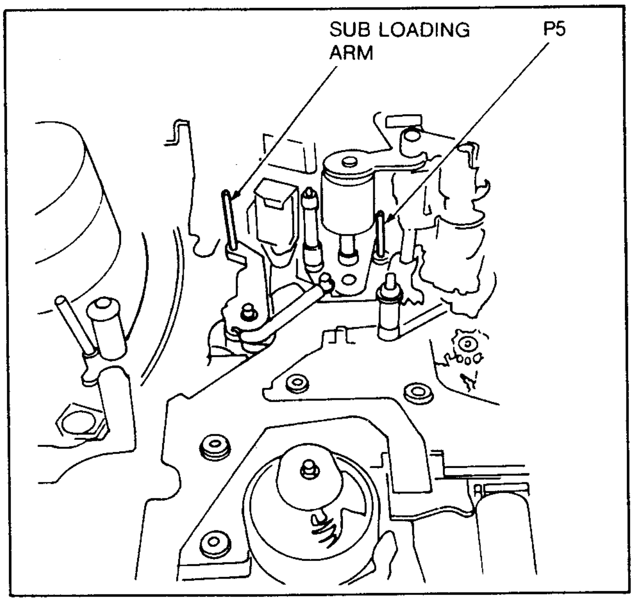


FIG.D26

Note:
1) Don't add the large torque to any gears not to break it.
2) When reinstalling the cassette compartment, refer to 2-2-4 Reinstallation of Cassette Compartment.
3) It is not possible to operate the mechanism from Eject position.

2-3. REPLACEMENT OF THE CYLINDER UNIT

2-3-1. REPLACEMENT OF THE D.D CYLINDER UNIT

Work with extreme care when removing or replacing the D.D. cylinder unit.
Do not touch the video head during servicing.

1. Remove the 2 screws (A) to take the Head Amp Pack Out.
2. Remove the 1 screw (B) to take the Earth Holder Unit Out.
3. Disconnect the 5P connector on the cylinder drive C.B.A.

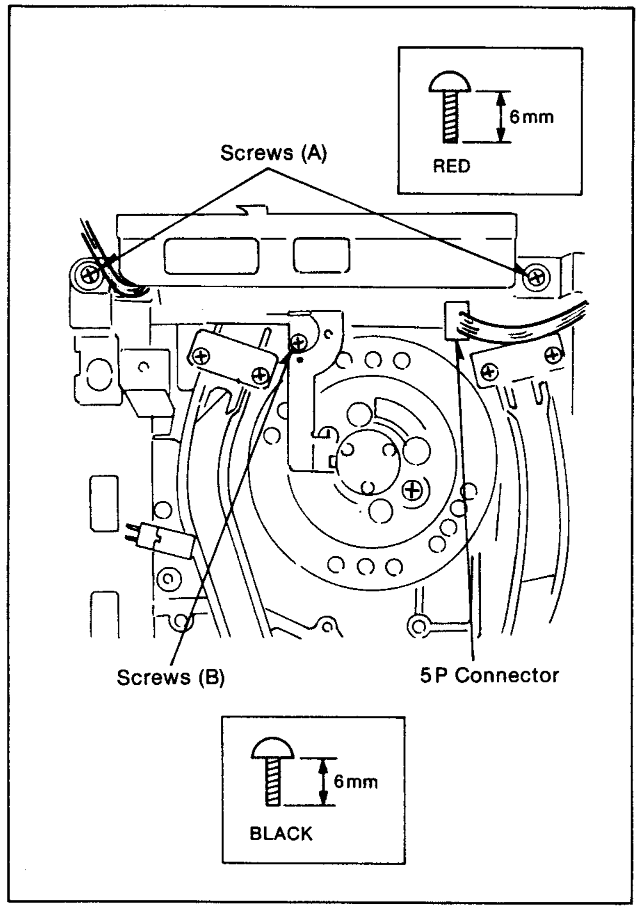


FIG.D27

4. Remove the 3 screws (C) to take the D.D. cylinder unit (with the cylinder drive C.B.A.) out.

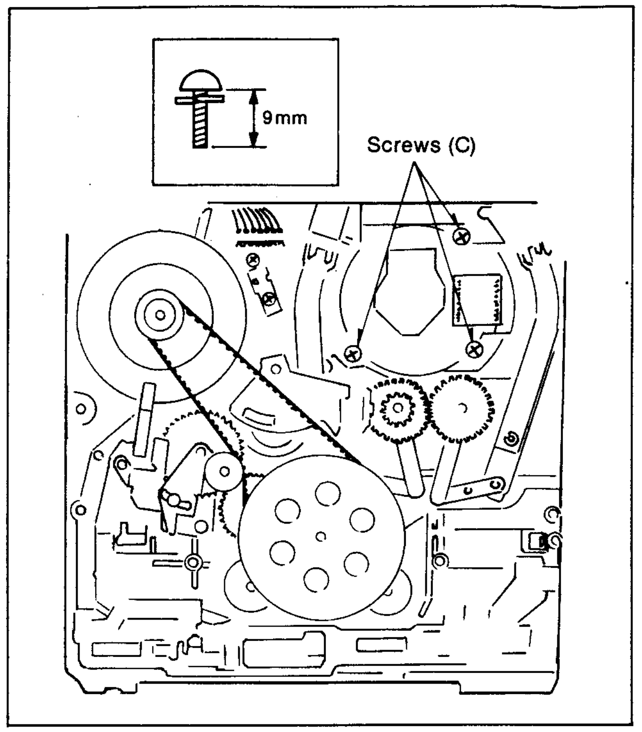


FIG.D28

Note:
Since there is very little clearance between the D.D. cylinder unit and the chassis, remove the D.D. cylinder unit gently and carefully.

5. Reinstall the new D.D.Cylinder Unit, tighten the 3 screws (C) and reinstall the Earth Holder Unit, tighten the 1 screw (B).
   Then re-connect the Head Amp pack and 5P connector and tighten 2 screws (A).

Note:
- (1) Gently rub the video head in direction of tape travel with Head cleaning stick.
- (2) After replacement, confirm the performance. If any further maintenance is required, perform "TAPE INTER-CHANGE ABILITY ADJUSTMENT".

2-3-2. REPLACEMENT OF THE CYLINDER DRIVE C.B.A.

1. Remove the D.D. cylinder unit referring the Item 2–3–1.
2. Place the D.D. cylinder unit upside down.
3. Unsolder the soldered portion (E) for shield case to take it out.
4. Unsolder the 18 soldered portions (D) indicated by an arrow wark (including 10 soldered portions inside of shield case).
5. Remove the 2 screws (F) to remove the cylinder drive C.B.A. unit.

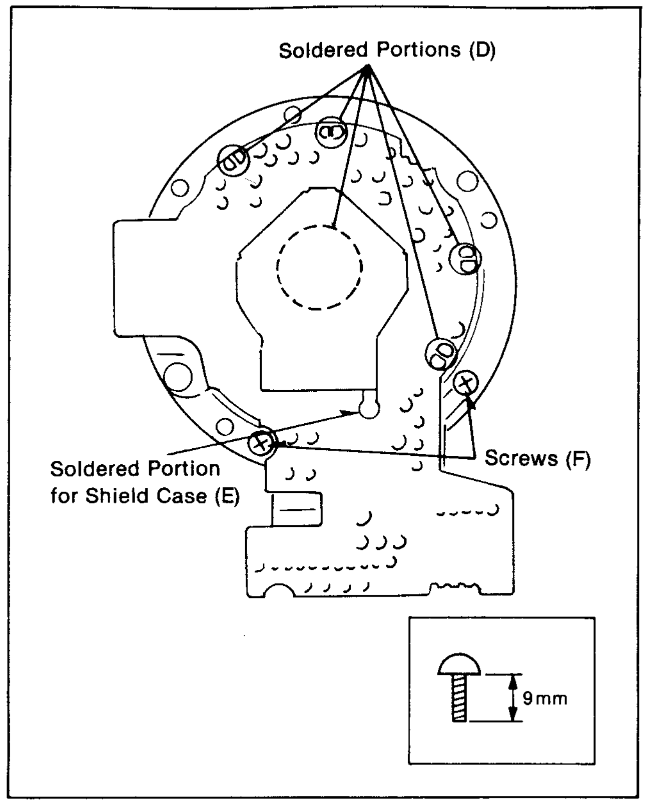


FIG.D29

6. Reinstalling is just reverse way of above procedures.

2-3-3. REPLACEMENT OF THE CYLINDER DRIVE IC

1. Remove the Cylinder Drive C.B.A. as item 2–3–2.
2. Remove the screw (G) to take the heat sink Plate out.
3. Unsolder the 18 soldered portions of the Cylinder Drive IC to take it out.
4. Reinstall the New IC with the care of Pins location.
5. Re-solder the 18 pins of the Cylinder Drive IC.
6. Reinstall the Cylinder Drive C.B.A. to the D.D. Cylinder Unit.

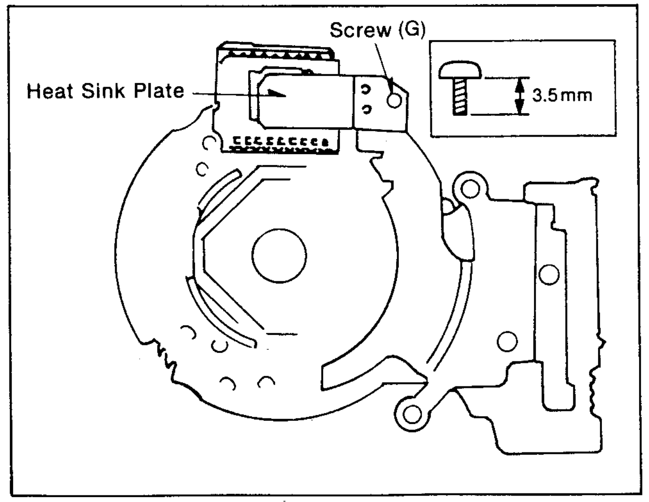
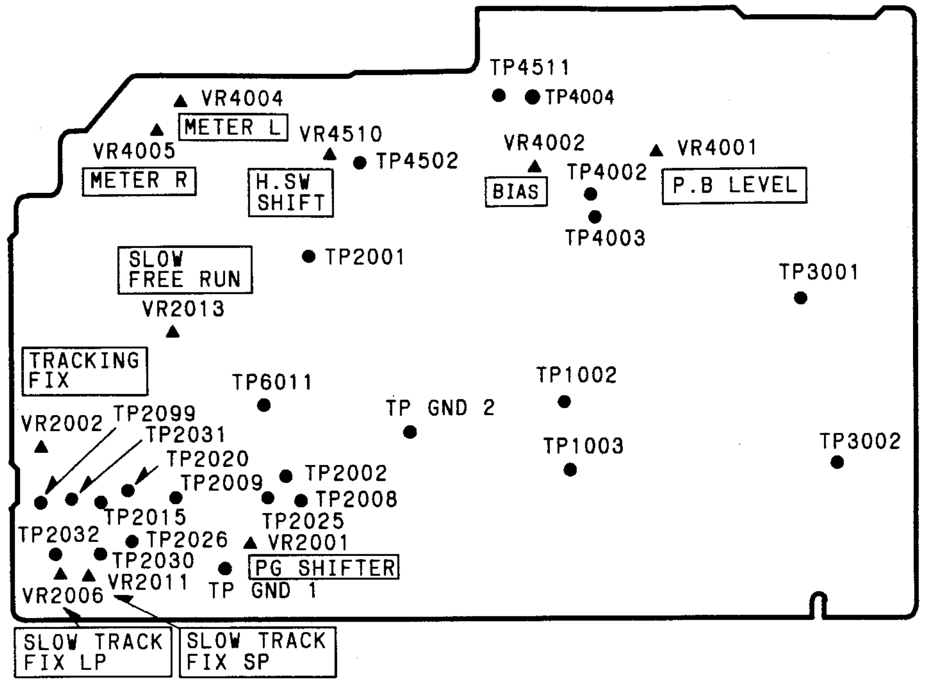


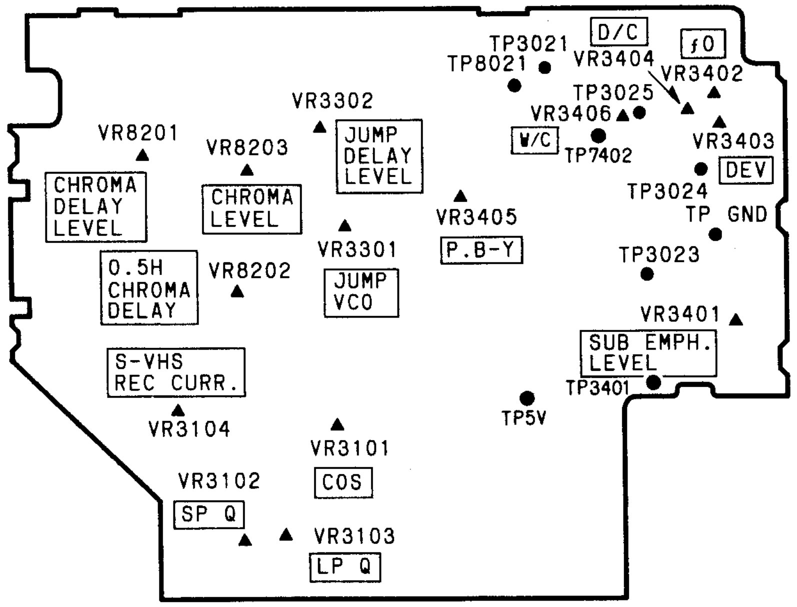
FIG.D30

LOCATION OF TEST POINTS & CONTROLS

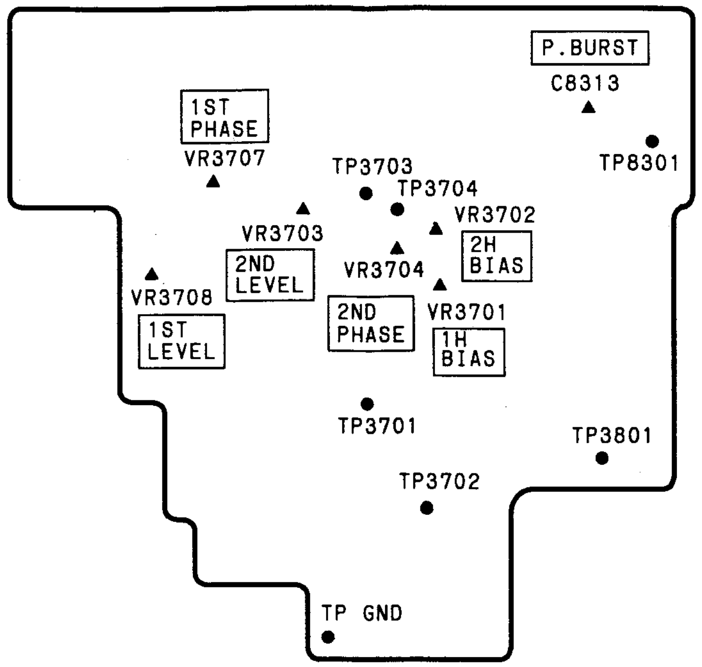
MAIN C.B.A.


TP4511
TP4004
VR4004
METER L
VR4510
VR4005
METER R
H.SW SHIFT
TP4502
VR4002
BIAS
TP4002
VR4001
P.B LEVEL
TP4003
SLOW FREE RUN
TP2001
VR2013
TP3001
TRACKING FIX
TP6011
TP1002
TP GND 2
VR2002
TP2099
TP2031
TP2020
TP2009
TP2002
TP2008
TP1003
TP3002
TP2015
TP2025
TP2032
TP2026
VR2001
TP2030
PG SHIFTER
VR2006
VR2011
TP GND 1
SLOW TRACK FIX LP
SLOW TRACK FIX SP

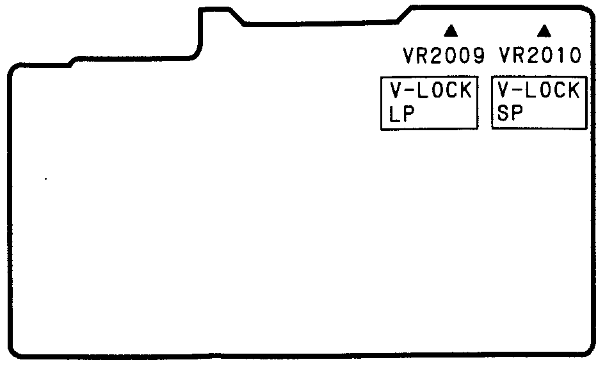
S-VHS C.B.A.


D/C
ƒ0
TP3021
TP8021
VR3404
VR3402
VR3302
TP3025
VR3406
VR8201
VR8203
JUMP DELAY LEVEL
W/C
TP7402
VR3403
CHROMA DELAY LEVEL
CHROMA LEVEL
VR3405
TP3024
DEV
TP GND
VR3301
P.B-Y
0.5H CHROMA DELAY
VR8202
JUMP VCO
TP3023
VR3401
S-VHS REC CURR.
SUB EMPH. LEVEL
TP3401
VR3104
TP5V
VR3101
VR3102
COS
SP Q
VR3103
LP Q

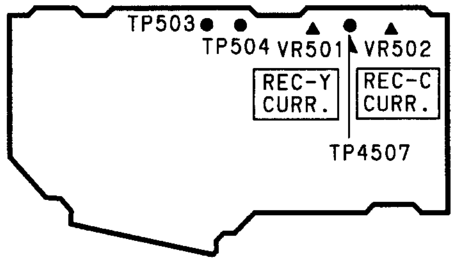
LUMINANCE & CHROMINANCE SEPARATION C.B.A.


P.BURST
C8313
1ST PHASE
VR3707
TP8301
TP3703
TP3704
VR3702
VR3703
2H BIAS
2ND LEVEL
VR3704
VR3708
2ND PHASE
VR3701
1ST LEVEL
1H BIAS
TP3701
TP3801
TP3702
TP GND

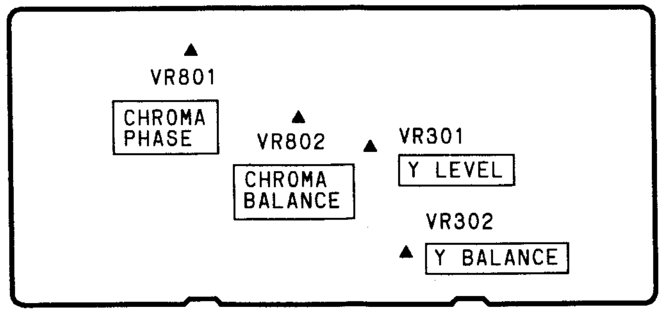
SERVO PACK C.B.A.


VR2009
VR2010
V-LOCK LP
V-LOCK SP

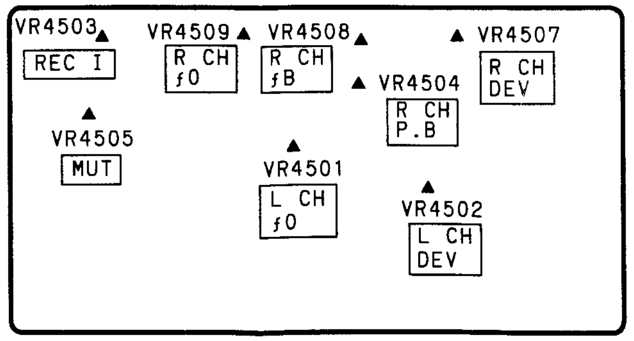
HEAD AMP C.B.A.


TP503
TP504
VR501
VR502
REC-Y CURR.
REC-C CURR.
TP4507

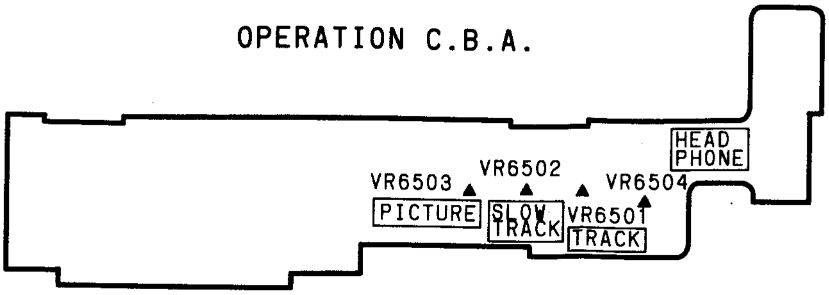
LUMINANCE & CHROMINANCE PACK C.B.A.


VR801
CHROMA PHASE
VR802
CHROMA BALANCE
VR301
Y LEVEL
VR302
Y BALANCE

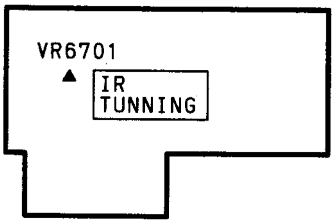
Hi-Fi AUDIO PACK C.B.A.


VR4503
REC I
VR4509
R CH ƒ0
VR4508
R CH ƒB
VR4507
R CH DEV
VR4504
R CH P.B
VR4505
MUT
VR4501
L CH ƒ0
VR4502
L CH DEV

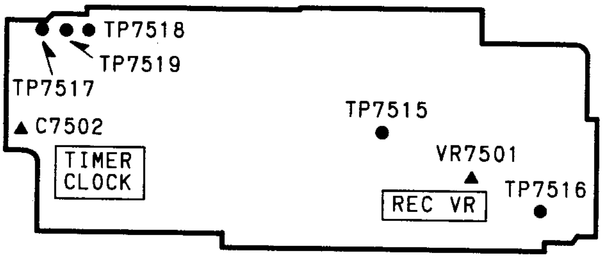
OPERATION C.B.A.


HEAD PHONE
VR6503
VR6502
VR6504
PICTURE
SLOW TRACK
VR6501
TRACK

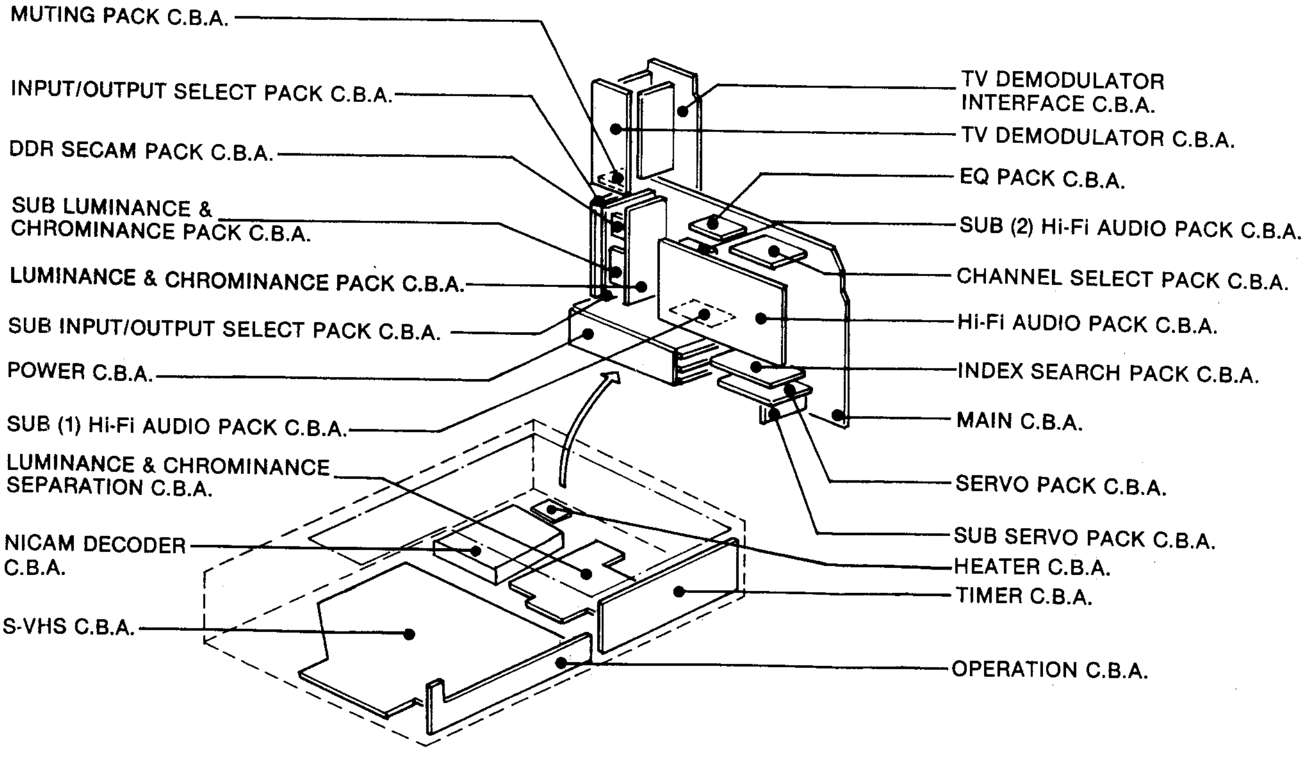
IR RECEIVER C.B.A.


VR6701
IR TUNNING

TIMER C.B.A.


TP7518
TP7519
TP7517
C7502
TIMER CLOCK
TP7515
VR7501
REC VR
TP7516

CIRCUIT BOARD LAYOUT


MUTING PACK C.B.A.
INPUT/OUTPUT SELECT PACK C.B.A.
DDR SECAM PACK C.B.A.
SUB LUMINANCE & CHROMINANCE PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
SUB INPUT/OUTPUT SELECT PACK C.B.A.
POWER C.B.A.
SUB (1) Hi-Fi AUDIO PACK C.B.A.
LUMINANCE & CHROMINANCE SEPARATION C.B.A.
NICAM DECODER C.B.A.
S-VHS C.B.A.
TV DEMODULATOR INTERFACE C.B.A.
TV DEMODULATOR C.B.A.
EQ PACK C.B.A.
SUB (2) Hi-Fi AUDIO PACK C.B.A.
CHANNEL SELECT PACK C.B.A.
Hi-Fi AUDIO PACK C.B.A.
INDEX SEARCH PACK C.B.A.
MAIN C.B.A.
SERVO PACK C.B.A.
SUB SERVO PACK C.B.A.
HEATER C.B.A.
TIMER C.B.A.
OPERATION C.B.A.

2-4. ELECTRICAL ADJUSTMENT PROCEDURES

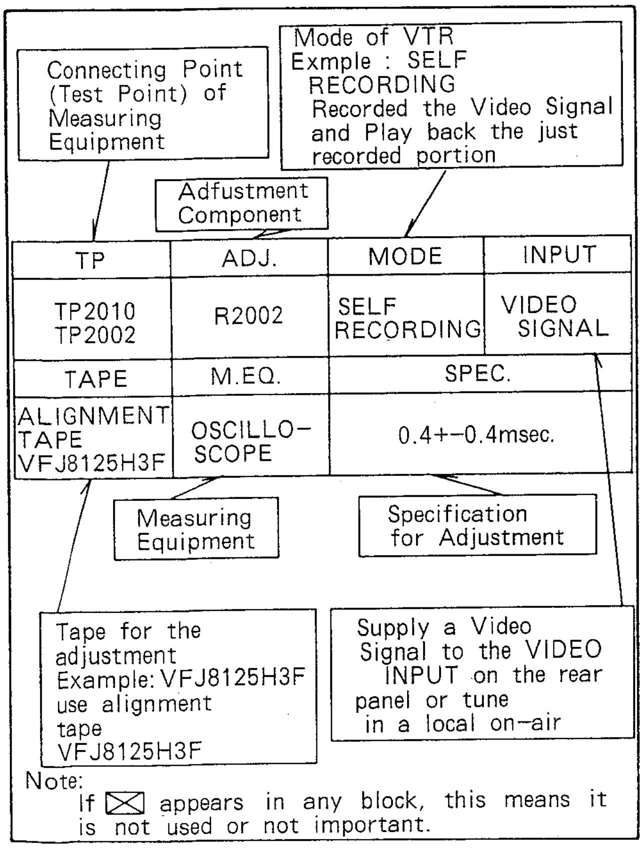
This section provides complete electrical adjustment procedures which may be required for electronic circuits of S-VHS Video Cassette Recorders **NV-FS1B/EB**.

2-4-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001~50V
2. Dual-Trace Oscilloscope
   Voltage range: 0.005~50V/div.
   Frequency Range: DC-30MHz
   Probes: 10:1
3. Frequency counter
   Frequency Range: 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range: 0~500KHz
5. Video Sweep Generator
   Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plaastic Tip Driver
8. VHS Alignment Tape (VFJ8125H3F)
9. Pattern Generator
10. VHS Blank Tape
11. S-VHS Blank Tape

2-4-2. HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Mode of VTR
Exmple : SELF RECORDING
Recorded the Video Signal and Play back the just recorded portion
Adfustment Component
Measuring Equipment
Specification for Adjustment
Tape for the adjustment
Example: VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air

TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M.EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	0.4+-0.4msec.	

Note:
If ☒ appears in any block, this means it is not used or not important.

FIG. E1

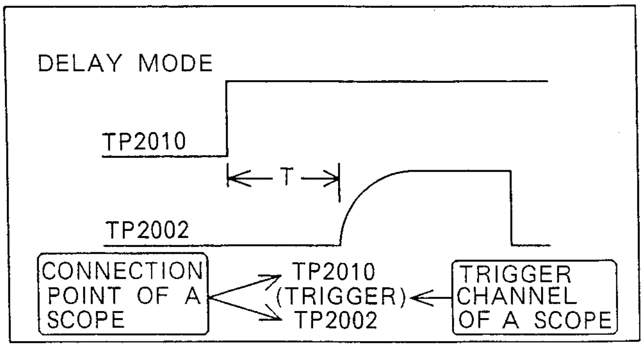

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

FIG. E2

Note:
Befor the electrical adjustment, set the VTR as following conditions except for especial instructions in each adjustment item.

1. Tracking Control VR...Centre FIX position
2. Picture sharpness VR...Centre FIX position
3. Slow Tracking Control VR...Centre FIX position
4. S-VHS Selector...AUTO position
5. Image Slector...NORMAL position
6. Tape Speed Selector...SP positon
7. Audio Rec Level Control Selector...AGC position
8. MPX Filter Switch...OFF position
9. Input Signal Selector...LINE position
10. Filter/Test Signal Switch...AUTO position
11. DBS Switch...OFF position

SERVO Section

2-4-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAY	☒
TAPE	**M.EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	7.0+-0.5H	

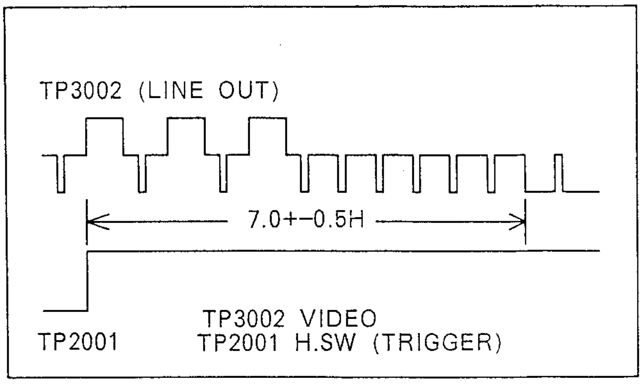

TP3002 (LINE OUT)
7.0+-0.5H
TP2001
TP3002 VIDEO
TP2001 H.SW (TRIGGER)

FIG. E3

2-4-4. TRACKING FIX ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP2002	VR2002	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=1.6+−0.4msec.	

1. Playback the just recorded portion.
2. Adjust VR2002 so that the period "T" becomes 1.6+−0.4msec as shown in FIG. E4.

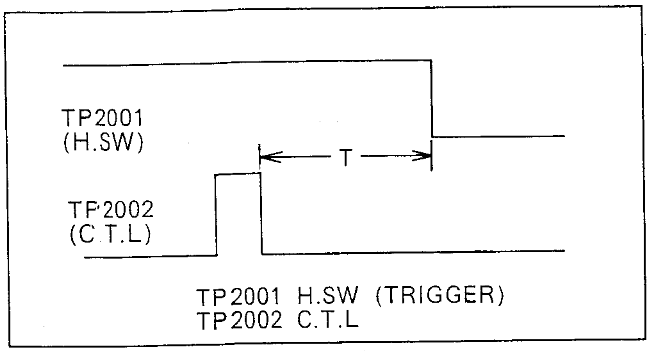


FIG. E4

2-4-5. SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	STILL	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE. (60min type)	FREQUENCY COUNTER	453+−15Hz	

1. Play back the just recorded portion and place the unit in STILL mode.
2. Connect the jumper wire between TP2025 and GND.
3. Connect the jumper wire between TP2026 and GND.
4. Connect the frequency counter to TP2015.
5. Adjust the VR2013 so that the reading of the Frequency Counter is 453+−15Hz.

2-4-6. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2020 TP2002	VR2011 (SP) VR2006 (LP)	SLOW	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE (60min type)	OSCILLO-SCOPE	T=20.0+−2.0msec. (SP) T=16.0+−2.0msec. (LP)	

1. Play back the just recorded portion in SLOW mode.
2. Adjust the VR2011 (SP) and VR2006 (LP) respectively as shown in FIG. E5.

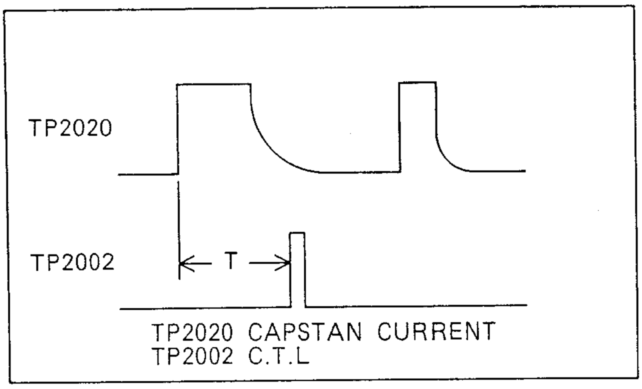


FIG. E5

2-4-7. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TV MONITOR	VR2010 (SP) VR2009 (LP)	STILL	VIDEO SIGNAL (MONO SCOPE)
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR	NO V-DANCING	

1. Play back the just recorded portion in STILL mode.
2. Adjust VR2010 (SP), and VR2009 (LP) respectively on the Servo pack so that the V-dancing does not appear on the TV Monitor as shown in FIG. E6.
3. Confirm that the V-dancing does not appear in cue and Review modes. If the V-dancing is appeared on the TV Monitor, this adjustment should be repeated again.

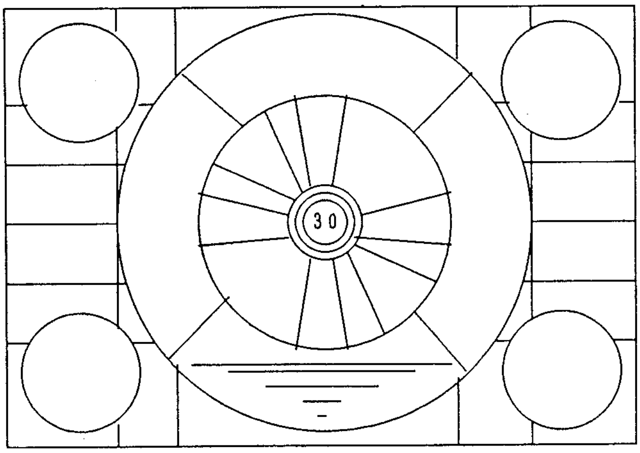


FIG. E6

LUMINANCE, CHROMINANCE & HEAD AMP Section

2-4-8. SUB-EMPHASIS LIMITER BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3401	VR3401	STOP	
TAPE	M.EQ.	SPEC.	
	D.V.M	3.48V+-0.05V (DC RANGE)	

1. Set the Recording SW to "LP" position.
2. Connect the D.V.M to TP3401.
3. Adjust VR3401 so the the reading of D.V.M is 3.43V~3.53V in the DC range.

2-4-9. PILOT BURST PHASE ADJUSTMENT

(WITH VECTORSCOPE)

TP	ADJ.	MODE	INPUT
TP8301	C8301	STOP	COLOUR BAR SIGNAL (S-VIDEO INPUT)
TAPE	M.EQ.	SPEC.	
	VECTOR-SCOPE	-90degrees+-5degree	

1. Set the Input Signal Selector to S-VIDEO position.
2. Supply the colour bar signal to the S-Video Input on the rear panel.
3. Connect the vectorscope to TP8301 and its external terminal for trigger to Line Output of VTR.
4. Adjust C8301 so that the pilot burst signal is placed in -90+-5degree against the U-Axis on Vectorscope.

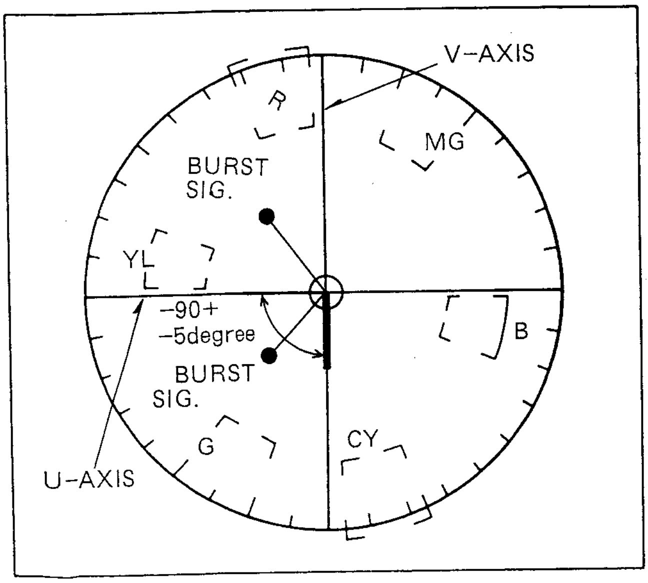

V-AXIS
R
MG
BURST SIG.
YL
-90+ -5degree
B
BURST SIG.
G
CY
U-AXIS

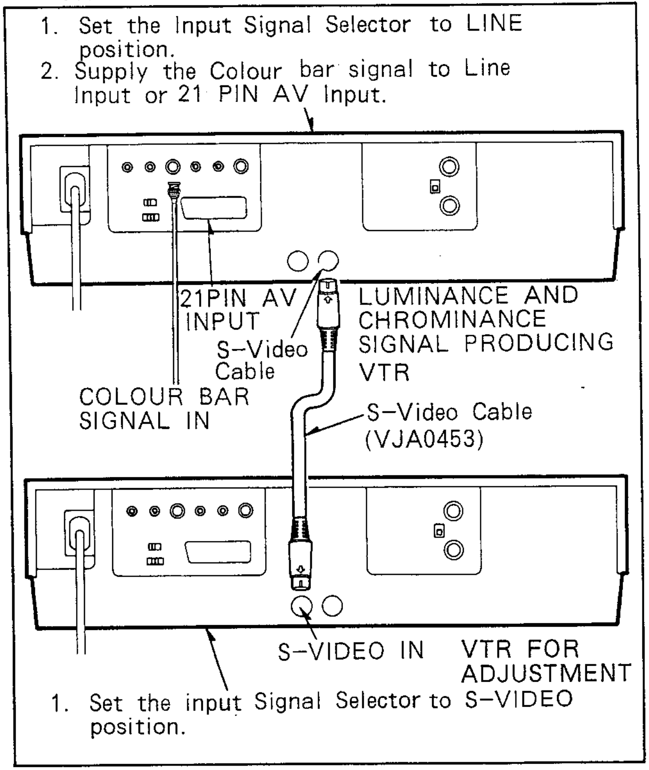
FIG. E7

Note :
HOW TO OBTAIN THE LUMINANCE AND CHROMINANCE SEPARATION SIGNAL FOR S-VIDEO INPUT

(USING NEW S-VHS VTR (NV-FS1))

Prepare a new S-VHS Video Tape recorder (NV-FS1) and use it to obtain the luminance and chrominance separation signals as shown in FIG. E8.

1. Set the Input signal selector to LINE position on prepared S-VHS VTR (NV-FS1).
2. Supply the Colour bar signal to Line Input or 21 PIN AV INPUT on prepared S-VHS VTR (NV-FS1).
3. Connect the S-Video cable (VJA0453) between S-VHS VTRs.



1. Set the Input Signal Selector to LINE position.
2. Supply the Colour bar signal to Line Input or 21 PIN AV Input.

21PIN AV INPUT
S-Video Cable
LUMINANCE AND CHROMINANCE SIGNAL PRODUCING VTR
COLOUR BAR SIGNAL IN
S-Video Cable (VJA0453)
S-VIDEO IN
VTR FOR ADJUSTMENT

1. Set the input Signal Selector to S-VIDEO position.

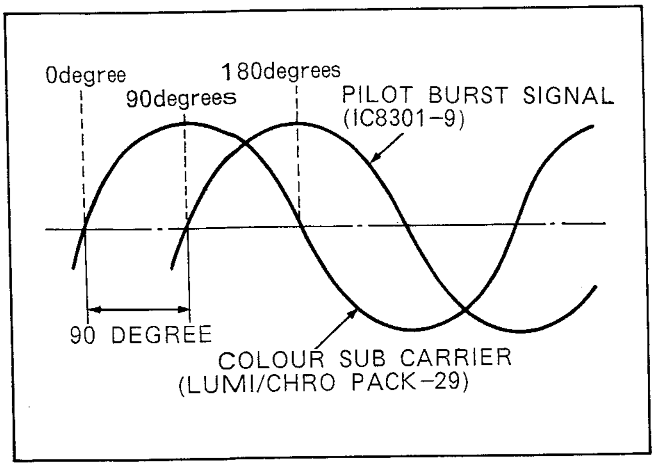
FIG. E8

(WITH OSCILLOSCOPE)

TP	ADJ.	MODE	INPUT
LUMINANCE /CHROMIN-ANCE PACK -29 (CH-1) IC8301-9 (CH-2)	C8301	STOP	COLOUR BAR SIGNAL
TAPE	M.EQ.	SPEC.	
	OSCILLO-SCOPE	90degrees PHASE DIFFERENCE	

1. Set the Input signal selector to LINE position.
2. Supply the colour bar signal to LINE Input on the rear panel.
3. Connect the oscilloscope to luminance/chrominance pack-(29) for CH-1 and IC8301-9 for CH2.

4. Adjust C8301 so that the pilot burst signal is placed in 90degrees against the Input Colour Sub carrier as shown in FIG. E9.



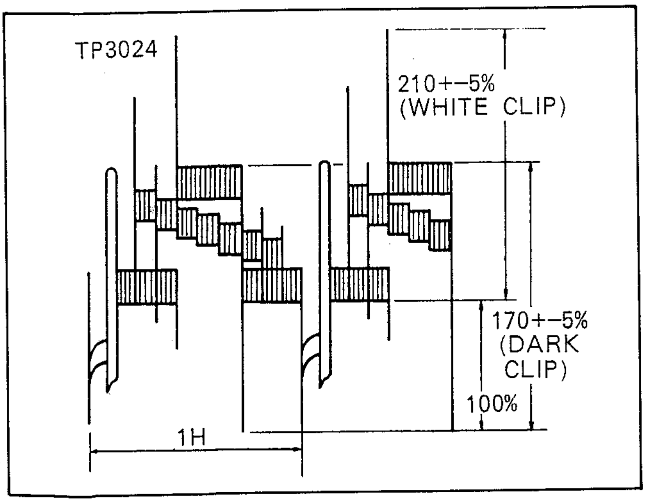
0degree
180degrees
90degrees
PILOT BURST SIGNAL
(IC8301-9)
90 DEGREE
COLOUR SUB CARRIER
(LUMI/CHRO PACK-29)

FIG. E9

2-4-10. WHITE AND DARK CLIP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3024	VR3406 (W/C) VR3404 (D/C)	STOP	COLOUR BAR SIGNAL (S-VIDEO INPUT)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	A=210+-5% B=170+-5%	

1. Set the Input Signal Selector to S-VIDEO Position.
2. Set the tape Speed selector to LP position.
3. Supply the colour bar signal to S-Video Input.
4. Connect the oscilloscope to TP3024.
5. Adjust VR3406 (WHITE CLIP) and VR3404 (DARK CLIP) respectively so that the A level of white clip is 210+-5% and B level of dark clip is 170+-5% as shown in FIG. E10.



TP3024
210+-5%
(WHITE CLIP)
170+-5%
(DARK CLIP)
100%
1H

FIG. E10

Note:
Prior to Sync Tip Frequency Adjustment and Deviation Adjustment (Item 2-4-11), this adjustment must be completed.

2-4-11. SYNC TIP FREQUENCY AND DEVIATION ADJUSTMENT

((S-VHS MODE))

a. SYNC TIP FREQUENCY ADJSUTMENT

TP	ADJ.	MODE	INPUT
IC3402-11	VR3402	RECORDING	NO SIGNAL
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	FREQ. COUNTER	5.4MHz+-0.05MHz	

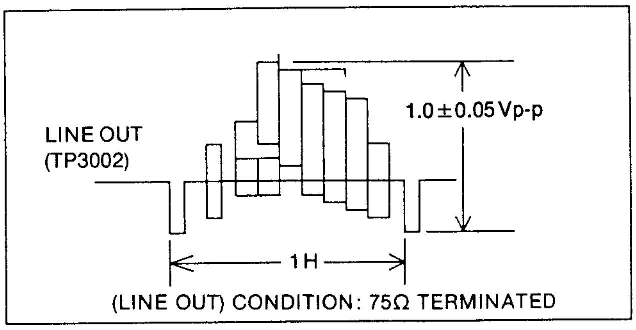
1. Record the no signal with S-VHS mode using S-VHS blank tape.
2. Adjust VR3402 so that the reading of frequency counter is 5.4MHz+-0.05MHz at IC3402-11.

b. DEVIATION ADJUSTMENT

(ADJUSTMENT METHOD 1)

TP	ADJ.	MODE	INPUT
TP3002	VR3403	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	1.0+-0.05Vp-p	

1. Connect the oscilloscpe to TP3002.
2. Play back the just recorded portion.
3. Confirm the level of output signal and if the output signal is out of specifitions,adjust VR3403 during recording so that the playback output signal (1.0+-0.05Vp-p) can be obtained by repeating the recording and playback.



LINE OUT
(TP3002)
1.0±0.05Vp-p
1H
(LINE OUT) CONDITION: 75Ω TERMINATED

FIG. E11

Note:
This adjustment should be performed since the other adjustments of Luminance Chrominance & Head Amp have been always completed.

(ADJUSTMENT METHOD 2)

TP	ADJ.	MODE	INPUT
TP3002	VR3403	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	1.0+-0.05Vp-p	

1. Record the colour bar signal.
2. Play back the just recorded portin by another prepared new S-VHS VTR (NV-FS1) and confirm the output level at TP3002.

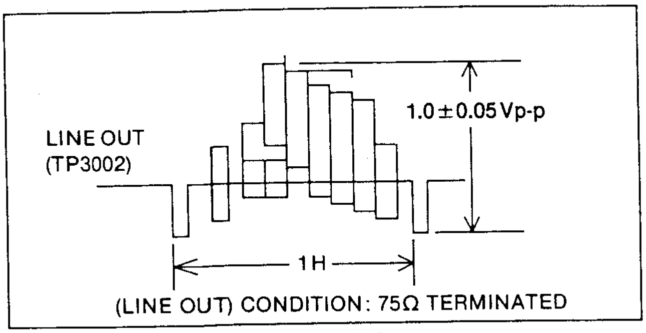


FIG. E12

3. If the output level (TP3002) is out of specification, adjust VR3403 during recording so that the output level (1.0+-0.05Vp-p) is obtained on another new S-VHS VTR (NV-FS1).

2-4-12. CHROMINANCE & LUMINANCE RECORDING CURRENT ADJUSTMENT

* CHROMINANCE RECORDING CURRENT ADJ.

TP	ADJ.	MODE	INPUT
TP503(HOT) TP504(GND)	VR502	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	28+-3mVp-p	

1. Set the Tape Speed Selector to LP position.
2. Connect the oscilloscpe to TP503 (HOT) and TP504 (GND).
3. Before Chrominance recording current adjustment Luminance recording current must be closed to observe the chrominance signal. (VR501 is minimum position.)
4. Adjust VR502 for 28+-3mVp-p as shown below.

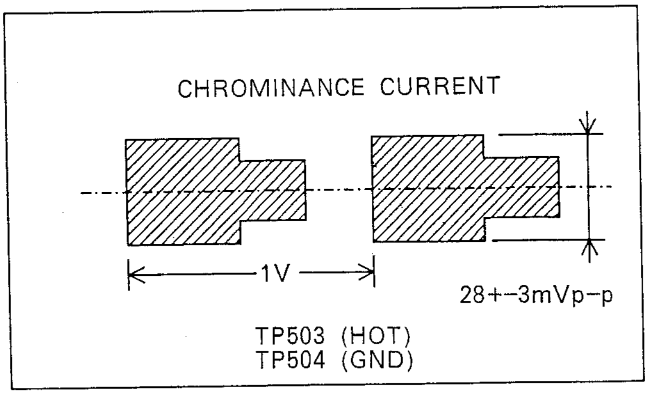


FIG. E13

* S-VHS LUMINANCE RECORDING CURRENT ADJ.

TP	ADJ.	MODE	INPUT
TP503(HOT) TP504(GND)	VR501	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	120+-5mVp-p	

5. After chrominance recording current adjustment, adjust VR501 for 120+-5mVp-p as shown below.

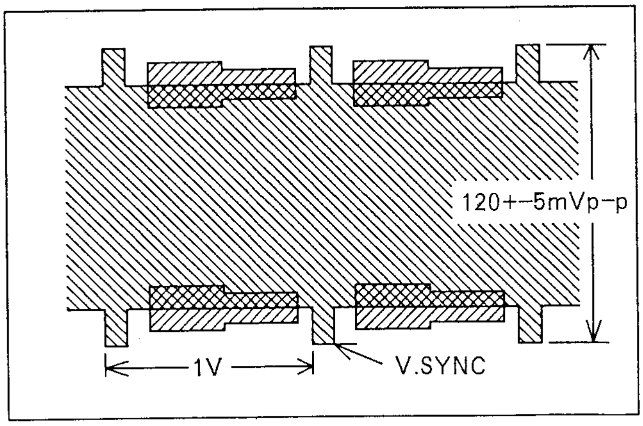


FIG. E14

* VHS LUMINANCE RECORDING CURRENT ADJ.

TP	ADJ.	MODE	INPUT
TP503(HOT) TP504(GND)	VR3104	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
VHS BLANK TAPE	OSCILLO-SCOPE	110+-5mVp-p	

1. Set the S-VHS selector to OFF position.
2. Set the Tape Speed Selector to LP position.
3. Connect the oscilloscpe to TP503 (HOT) and TP504 (GND).
4. Adjust VR3104 for 110+-5mVp-p as shown in FIG. E15.

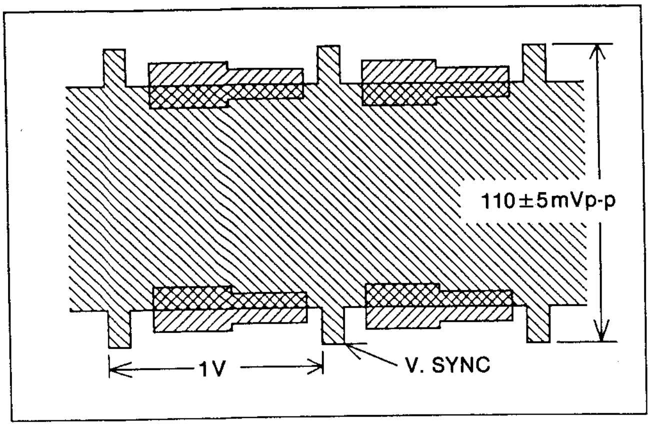

110±5mVp-p
1V
V. SYNC

FIG. E15

Prior to Sub-Emphasis Limiter Balance Adjustment (2-4-8), White and Dark Clip Adjustment (2-4-10) and Sync Tip Frequency/Deviation Adjustment (2-4-11),this adjustment must be completed.

2-4-13. PLAYBACK VIDEO LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR3405(Y) VR8203(C)	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	1.0+-0.05Vp-p (Y) 0.55+-0.1Vp-p (C)	

1. Set the Tape Speed Selector to LP position.
2. Connect the oscilloscope to Line out (TP3002).
3. Adjust VR3405 for 1.0+-0.05Vp-p and VR8203 for 0.55+-0.1Vp-p as shown in FIG. E16.

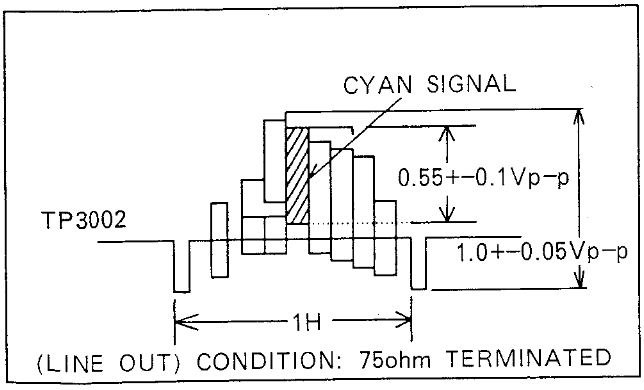

CYAN SIGNAL
TP3002
0.55+-0.1Vp-p
1.0+-0.05Vp-p
1H
(LINE OUT) CONDITION: 75ohm TERMINATED

FIG. E16

Note:
"Y" means "Luminance"
"C" means "Chrominance"

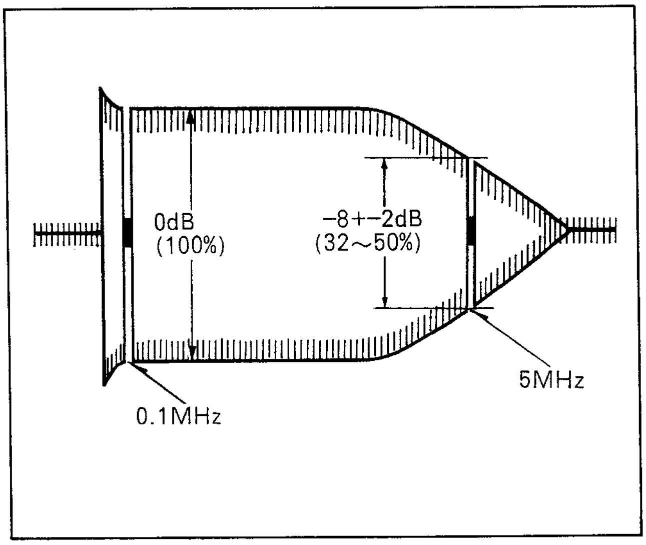

0dB
(100%)
-8+-2dB
(32~50%)
0.1MHz
5MHz

FIG. E17

2-4-14. S-VHS FREQUENCY RESPONCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
S-VIDEO OUTPUT	VR3101	SELF RECORDING	VIDEO SWEEP
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	-8+-2dB (32~50%)	

1. Set the sweep generator output as shown below.

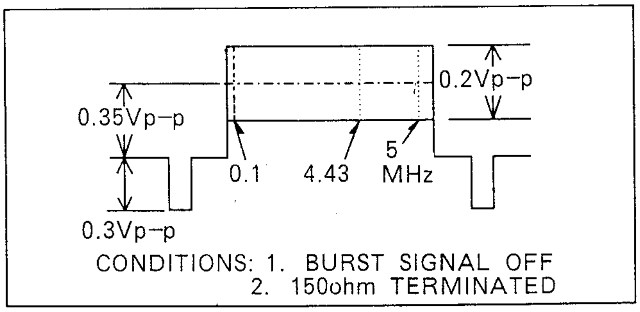

0.2Vp-p
0.35Vp-p
0.1
4.43
5
MHz
0.3Vp-p
CONDITIONS: 1. BURST SIGNAL OFF
2. 150ohm TERMINATED

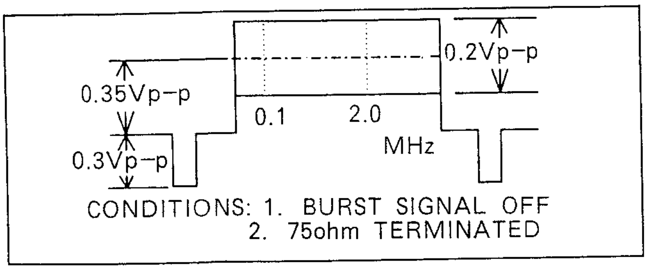
FIG. E18

2. Supply the video sweep signal to S-Video Input.
3. Set the Input Signal Selector to S-VHS position.
4. Playback the just recorded portion.
5. Adjust VR3101 so that the level at 5MHz becomes -8+-2dB (32~50%) comparing with the level at 0.1MHz as shown in FIG. E18.

2-4-15. VHS FREQUENCY RESPONSE ADJSUTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR3102 (SP) VR3103 (LP)	SELF RECORDING	VIDEO SWEEP
TAPE	M.EQ.	SPEC.	
BLANK TAPE	VIDEO SWEEP/ OSCILLO SCOPE	A=0+−1dB (90∼110%):SP A=−2+−1dB (70∼90%):LP	

1. Set the sweep generator output as shown in FIG. 19.



CONDITIONS: 1. BURST SIGNAL OFF
2. 75ohm TERMINATED

FIG. E19

2. Play back the just recorded portion.
3. Adjust volume VR3102(SP), VR3103(LP) resoectively so that the level at 2MHz (A) becomes within specification comparing with the level at 0.1MHz as shown in FIG. E20.

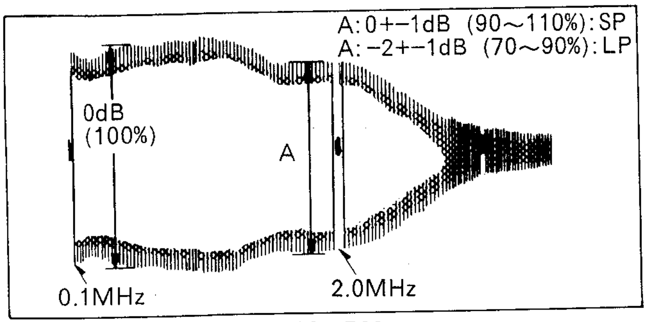


FIG. E20

2-4-16. LUMINANCE/CHROMINANCE SEPARATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3703	VR3701, VR3702	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TP3002	VR3708, VR3707		
TP3702	VR3703, VR3704		VIDEO SIGNAL (MULTI BURST)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSILLO-SCOPE	MENTIONED BELOW	

1. Connect the oscilloscope to TP3703.
2. Set the VTR to recording mode.
3. Adjust VR3701 and VR3702 mutually so that the chrominance level is muximized as shown in FIG. E21.

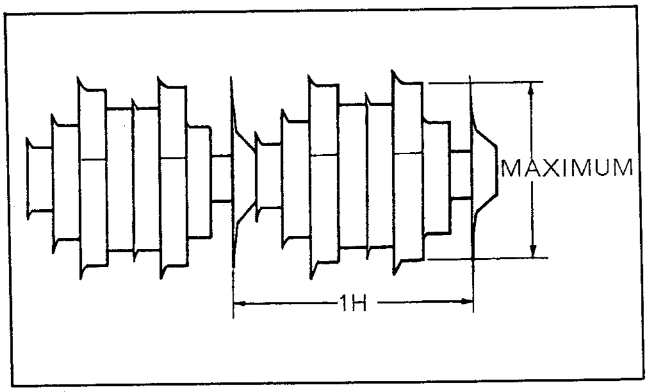


FIG. E21

4. Connect the oscilloscope to TP3002(Line Out).
5. Adjust VR3708 and VR3707 mutually so that the chrominance level is minimized as shown in FIG. E22.

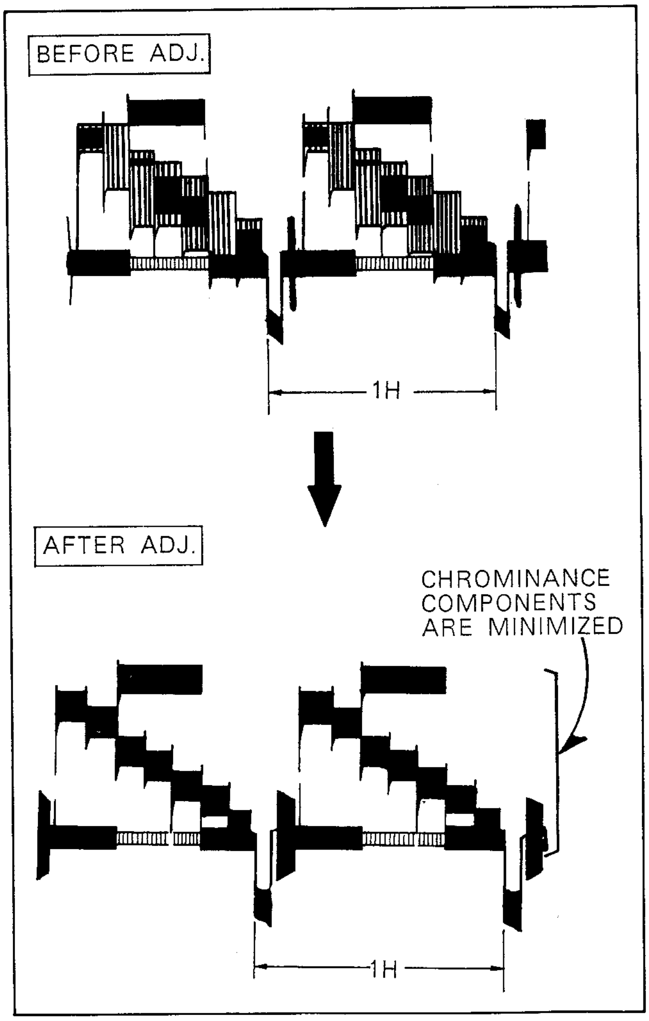


FIG. E22

6. Set the video sweep generator output as shown in FIG.E23.

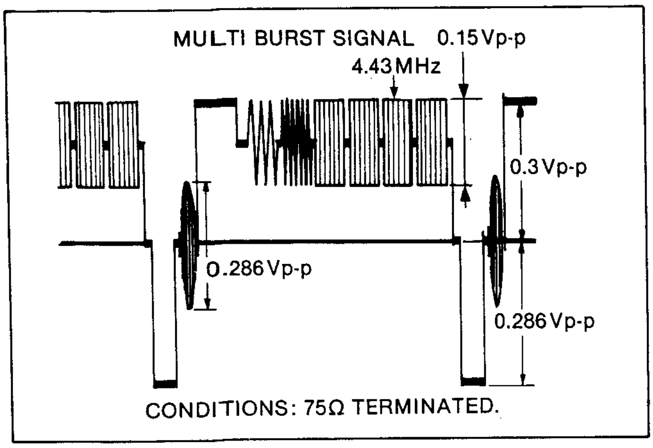


FIG. E23

7. Supply the multi burst signal from video sweep to Line Input.
8. Connect the oscilloscope to TP3702.
9. Adjustg VR3703 and VR3704 mutually so that the 4.43MHz burst signal is minimized as shown in FIG.E24.

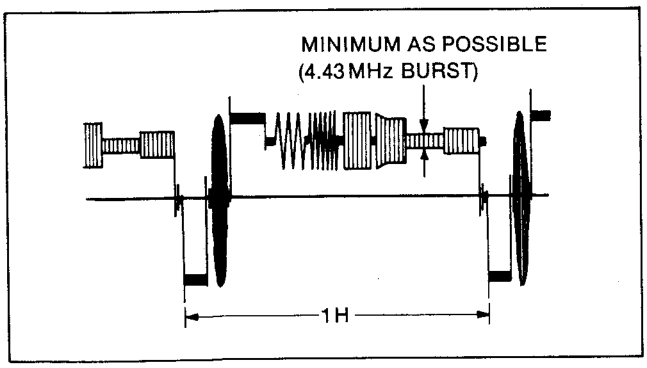


FIG. E24

2-4-17. LUMINANCE NOISE REDUCTION BLANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC302-20	VR302	STOP	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
	OSCILLO-SCOPE	WAVEFORM IS MINIMIZED	

1. Set the Tape Speed Selector to LP position.
2. Connect the oscilloscope to pin20 of IC302 on the Luminance & Chrominance C.B.A.
3. Adjust VR302 so that the waveform is minimized.

Note:
Prior to the above adjustment, the HQ Amp Gain adjustment should be always completed.

2-4-18. HQ AMP GAIN ADJSUTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR301	STOP	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
	OSCILLO-SCOPE	1.0+−0.1Vp−p	

1. Set the Tape Speed Selector to "LP" position.
2. Connect the oscilloscope to video Line out (TP3002).
3. Adjust VR301 so that the video level is 1.0+−0.1Vp−p.

2-4-19. CHROMA RECURSIVE ADJSUTMENT

TP	ADJ.	MODE	INPUT
IC302-7	VR801 VR802	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
	OSCILLO-SCOPE	WAVEFORM IS MINIMIZED	

1. Play back the just recorded portion.
2. Connect the oscilloscope to pin7 of IC302 on the Luminance & Chrominance C.B.A.
3. Adjust VR801 and VR802 mutually so that the chrominance waveform is minimized as shown in FIG. E25.

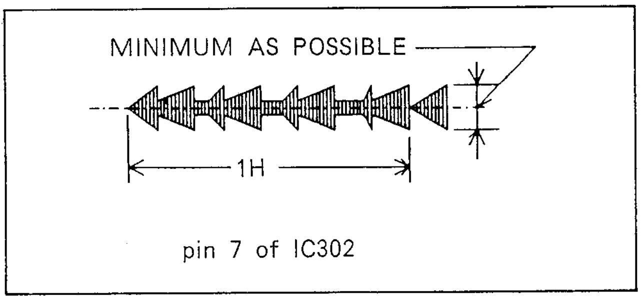


FIG. E25

2-4-20. JUMP VCO FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC3301-10	VR3301	STOP	
TAPE	M.EQ.	SPEC.	
	FREQUENCY COUNTER	31.25+−0.3kHz	

1. Connect the Frepuency Counter to pin 10 of IC3301 through the amplifier as shown below.

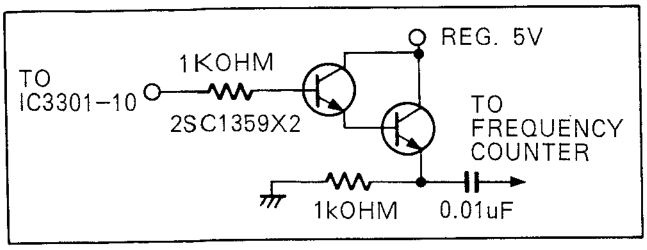


FIG. E26 Amplifier Circuit

2. Adjust VR3301 so that the reading of Frequency Counter is 31.25+-0.3KHz.

2-4-21. CHROMA DELAY LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR3302	SELF RECORDING	VIDEO SIGNAL (MONO SCOPE)
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	FLICKER IS MINIMIZED	

1. Set the Tape Speed Selector to LP mode.
2. Play back the just recorded portion in CUE mode.
3. Adjust VR3302 so the the flicker of luminance signal is minimized as shown in FIG. E27.

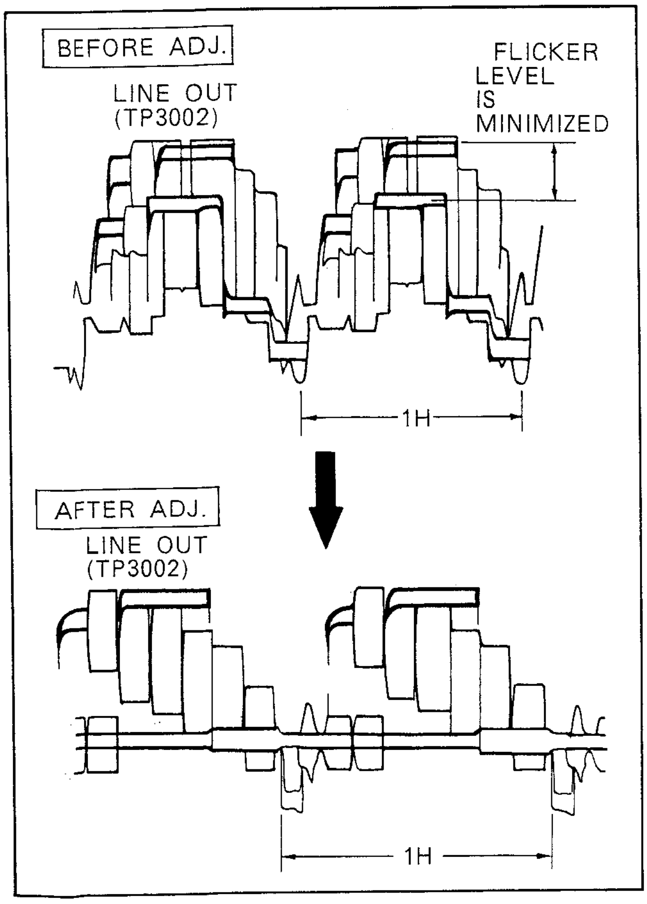


FIG. E27

Prior to Jump VCO Free Rnu Adjustment (2-4-20), this adjustment must be completed.

2-4-22. CHROMINANCE DELAY LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR8201 (STILL) VR8202 (CUE)	STILL OR CUE	VIDEO SIGNAL (COLOUR BAR)
TAPE	M.EQ.	SPEC.	
S-VHS BLANK TAPE	OSCILLO-SCOPE	FLICKER(CY AN) LEVEL IS MINIMIZED	

1. Connect the oscilloscope to TP3002.
2. Play back the just recorded portion in "STILL" mode.
3. Adjust VR8201 so that the flicker (cyan) level is minimized as shown in FIG. E28.
4. Next, place the VTR in CUE mode.
5. Adjust VR8202 so that the flicker (cyan) level is minimized as shown in FIG. E28.

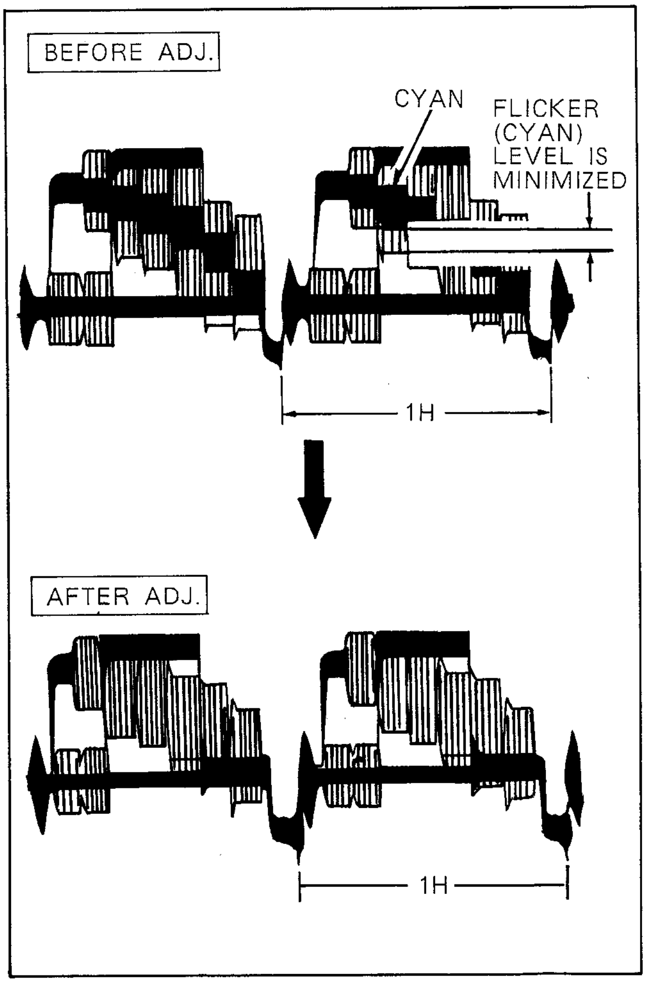


FIG. E28

NORMAL AUDIO Section

2-4-23. AUDIO BLAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002(HOT) TP4003(GND)	VR4002	RECORDING	
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.5+-0.1mVrms	

Note:

1) Make a short circuit at terminal of the Audio Input.

2-4-24. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT (TP4001)	VR4001	SELF RECORDING	1kHz,-10dB AUDIO SIGNAL VIDEO SIGNAL
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M.	E-E LEVEL=-8+-2dB (300mVrms~500mVrms) PLAYBACK LEVEL= E-E LEVEL+-0.5dB (+-20mVrms)	

1. Set the Audio Playback Mode Selector to NORMAL position. (Both the Left and Right Indicators are not lit.
2. Playback the just recorded portion.
3. Adjust VR4001 so that the level of the playback waveform becomes E-E level+-0.5dB (+-20mVrms)

Note:

1. Befor this adjustment, "Tape Interchangeability Adjustment" and "Audio Bias Current Adjustment" must be completed.
2. Video signal must be connected to video input.

Hi-Fi AUDIO Section

2-4-25. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
LEVEL METER	VR4004 (L) VR4005 (R)	STOP	1kHz, -10dB
TAPE	**M.EQ.**	**SPEC.**	
	SIGNAL GENERATOR	0dB indicator just lights up	

1. Set the Audio Playback Mode Selector to STEREO position. (Both the Left and Right Indicators are lit.)
2. Set the output of the Signal Generator to 1KHz and -10dB, and supply it to both Input Jacks (L) and (R).
   Next, Adjust the recording level with the Audio Rec Level Controls so that the audio outputs are 400mVp-p at both Output Jacks (L) and (R).
3. Adjust VR4004 so that the 0dB indicator just lights up on the L-ch level meter as shown below.
4. Adjust VR4005 so that the 0dB indicator just lights up on the R-ch level meter as shown below.

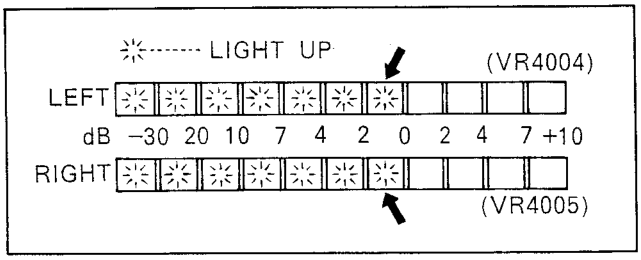


FIG. E29

2-4-26. Hi-Fi AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507(HOT) SHIELD CASE (GND)	VR4503	RECORDING	
TAPE	**M.EQ.**	**SPEC.**	
BLANK TAPE	OSCILLOSCOPE	220+-10mVp-p	

1. Set the Input Select SW to LINE.
2. Set the Audio Playback Mode Selector to "STEREO" position. (Both the Left and Right Indicators are lit.)
3. Connect the OSCILLOSCOPE to TP4507 (HOT) and SHIELD CASE (GND).
4. Adjust VR4503 so that the Audio recording current become 220+-10mVp-p as shown below.

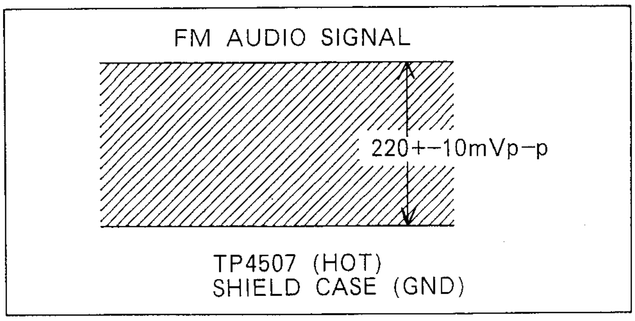


FIG. E30

Note:
Prior to HiFi Audio Muting Adjustment, this adjustment must be completed.

2-4- 27. AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4511 TP2001	VR4510	PLAY	
TAPE	M.EQ.	SPEC.	
ALIGNMENT TAPE VFJ8 125H3F	OSCILLO-SCOPE	$T=T2-\frac{(T2-T1)}{2}$ msec.	

1. Play back the alignment tape (VFJ8125H3F).
2. Connect the oscilloscope to TP4511 and TP2001.
3. Play back the just recorded portion.
4. Adjust VR4510 while listening to the stereo playback sound.
   (1) Confirm the "T2" time when the abnormal sound just occurs during turning clockwise on VR4510.
   (2) Confirm the "T1" time when the abnormal sound just occurs during turning counter clockwise on VR4510.
   (3) Adjust VR4510 so that the falling edge "T" of Audio H.SW pulse becomes the center portion of the both "T2" and "T1".

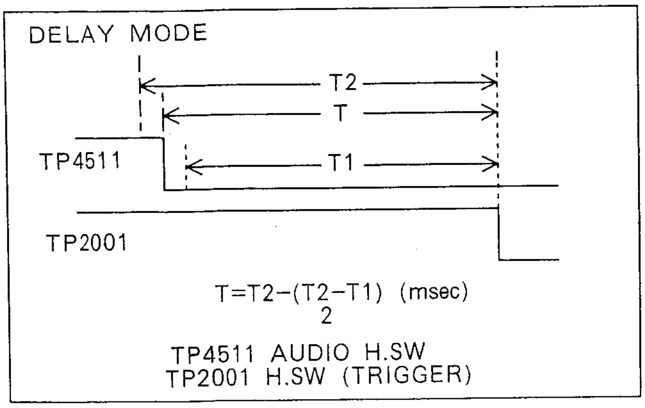


FIG. E31

2-4-28. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR4505	SELF RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	STEREO indication just lights up	

Note 1:
Before this adjustment "Tape Interchangeability Adjustment" must be completed.

Note 2:
To achieve this adjustment, the luminance recording current adjustment should be performed as follows.
First connect the oscilloscope to TP503 (HOT) and TP504 (GND) and then adjust VR501 for 150mVp-p [refer to S-VHS Luminance Recording current Adjustment (Item 2-4-12)].
After this adjustment, the luminance recording current adjustment must be returned to original position again.

1. Set Audio Playback Mode Selector to STEREO position. (Both the Left and Right Indicators are lit.)
2. Preadjust VR4505 until the Hi-Fi indicator on the front panel display turns the NORMAL indication.
3. Then slowly adjust VR4505 where the STEREO indication just lights up.
4. Confirm that the abnormal sound does not contain in the playback Hi-Fi sound.

2-4-29. Hi-Fi AUDIO CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-11 (L) IC4502-20 (R)	VR4501 (L) VR4509 (R)	STOP	
TAPE	M.EQ.	SPEC.	
	FREQUENCY COUNTER	1400+-10KHz (L) 1800+-10KHz (R)	

2-4-30. AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-5 (L) IC4502-26 (R)	VR4502 (L) VR4507 (R)	RECORDING	1KHz, -10dB (316mVp-p) AUDIO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR/ D.V.M.	280mVp-p	

1. Set the Audio Rec Level Control Selector to MANUAL position. (Both the left and Right Indicators are not lit.)
2. Set the output of the Signal generator to 1KHz and -10dB, and supply it to both input Jacks (L) and (R).
   Next, adjust the recording with the Audio Rec Level Controls so that the audio outputs are 400mVp-p at both Output Jacks (L) and (R).
3. Adjust VR4502 to 280mVp-p at IC4502-5 on HiFi AUDIO C.B.A. for L-Channel.
4. Adjust VR4507 to 280mVp-p at IC4502-26 on HiFi AUDIO C.B.A. for R-Channel.

2-4-31. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR4504 (L) VR4508 (R)	SELF RECORDING	SIGNAL GENERATOR (1kHz, −10dB)/ VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M	E−E LEVEL=−8+−2dB (300mVrms~500mVrms) PLAYBACK LEVEL= E−E LEVEL+−0.5dB (+−20mVrms)	

Note:
Before this adjustment, Tape Interchangeability Adjustment must be completed.

1. Play back the just recorded portion.
2. Adjust VR4504 and VR4508 volumes respectively so that the level of the playback becomes E−E level+−0.5dB (+−20mVrms).

TIMER Section

2-4-32. AN ELECTRICITY FAILUREDETECTION ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC7551−(12)	VR7502		
TAPE	M.EQ.	SPEC.	
	OSCILLO-SCOPE/ 2DC POWER SUPPLIES		

Note:
1) Do not connect the AC power plug.
2) Make a short circuit at C7571 to discharge. (refer to the Technical Information)

1. Set the voltage of the DC power supply (A) for 4.6+−0.05V and supply to IC7551−8 (+) and GND (−).
2. Set the voltage of the DC power supply (B) for 45+−1V and supply to the Channel Select Pack C.B.A. −15.
3. Turn the VR7502 until the voltage at IC7551−(12) is High Level.
4. Turn the VR7502 slowly until the voltage at IC7551−(12) is Low Level (0V).
5. Change the voltage of the DC power supply (A) from 4.6+−0.05V to 4.8+−0.05V.
6. Confirm the voltage at IC7551−(12) is High Level.

2-4-33. TIMER CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC7501−(37)	C7501		
TAPE	M.EQ.	SPEC.	
	FREQUENCY COUNTER	3906.25+−0.008us	

Note:
1) Do not connect the AC power plug.
2) Make a short circuit at C7571 to discharge.

1. Set the voltage of the DC power supply for 5.8V+−0.1V and supply it to P7506−6 (+) and GND (−).
2. Connect a jumper wire between P7506−5 and GND.
3. Connect the frequency counter to IC7501−37.
4. Adjust C7501 for 3906.25us+−0.008us.

2-4-34. TIMER MUTING FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC7651−(4)	VR7660		
TAPE	M.EQ.	SPEC.	
	FREQUENCY COUNTER	15.625+−0.05KHz	

Note:
1) To make this adjustment, please prepare the following circuit as shown below.
2) Make a short circuit at R7655.

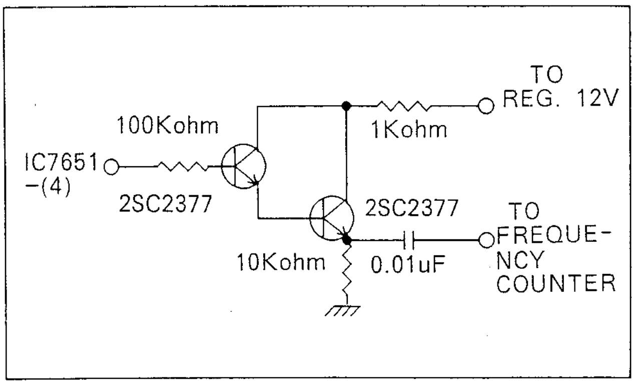
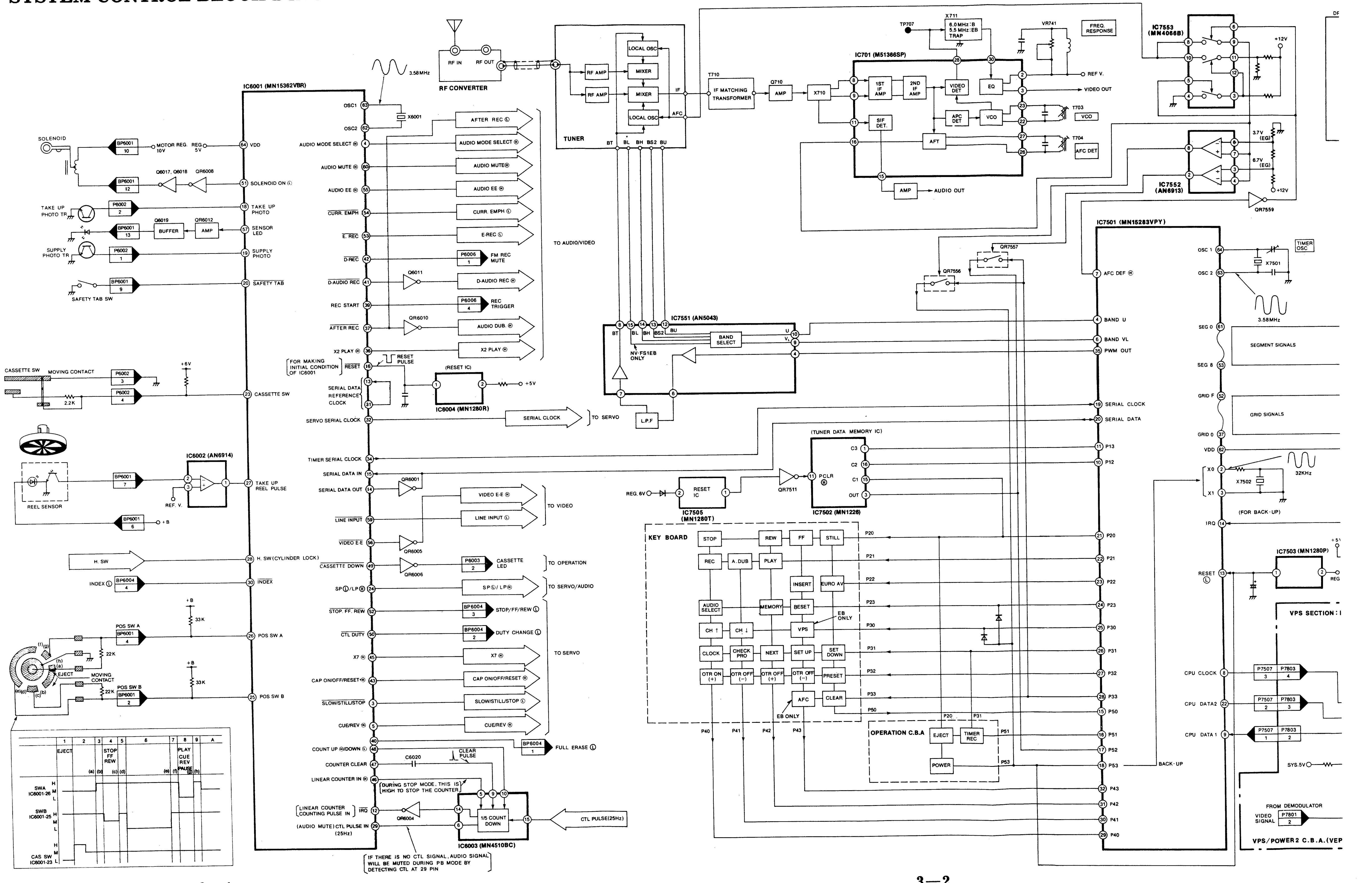
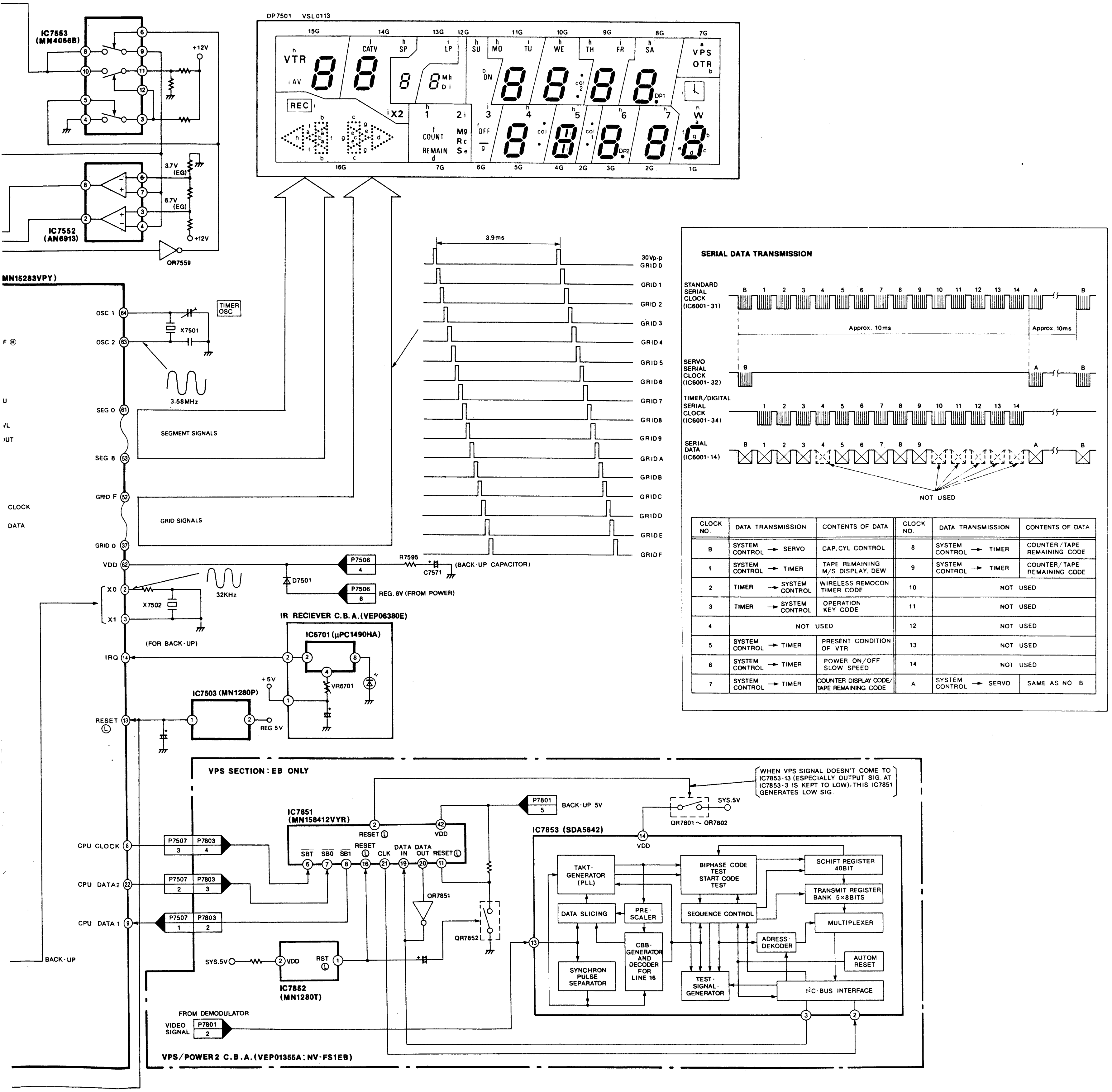


FIG. E32

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS
3-1. SYSTEM CONTROL BLOCK DIAGRAM



IC6001 (MN15362VBR)
SOLENOID
BP6001 10
MOTOR REG. 10V
REG 5V
VDD
Q6017, Q6018
QR6008
SOLENOID ON
TAKE UP PHOTO TR
P6002 2
TAKE UP PHOTO
Q6019
QR6012
BUFFER
AMP
SENSOR LED
SUPPLY PHOTO TR
SUPPLY PHOTO
SAFETY TAB SW
SAFETY TAB
CASSETTE SW
MOVING CONTACT
+6V
2.2K
CASSETTE SW
IC6002 (AN6914)
REEL SENSOR
REF. V.
TAKE UP REEL PULSE
+B
H. SW
H. SW (CYLINDER LOCK)
INDEX
BP6004 4
POS SW A
33K
22K
EJECT
MOVING CONTACT
POS SW B
SWA IC6001-26
SWB IC6001-25
CAS SW IC6001-23
STOP FF REW
PLAY CUE REV PAUSE
OSC1
OSC2
X6001
3.58MHz
AUDIO MODE SELECT
AUDIO MUTE
AUDIO EE
CURR. EMPH
E. REC
D-REC
D-AUDIO REC
REC START
AFTER REC
X2 PLAY
RESET
SERIAL DATA REFERENCE CLOCK
SERVO SERIAL CLOCK
TIMER SERIAL CLOCK
SERIAL DATA IN
SERIAL DATA OUT
LINE INPUT
VIDEO E-E
CASSETTE DOWN
SP/LP
STOP. FF. REW
CTL DUTY
X7
CAP ON/OFF/RESET
SLOW/STILL/STOP
CUE/REV
COUNT UP/DOWN
COUNTER CLEAR
LINEAR COUNTER IN
LINEAR COUNTER COUNTING PULSE IN
IRQ
(AUDIO MUTE) CTL PULSE IN (25Hz)
AFTER REC
AUDIO MODE SELECT
AUDIO MUTE
AUDIO EE
CURR. EMPH
E-REC
P6006 1
FM REC MUTE
Q6011
D-AUDIO REC
REC TRIGGER
QR6010
AUDIO DUB.
X2 PLAY
TO AUDIO/VIDEO
FOR MAKING INITIAL CONDITION OF IC6001
RESET PULSE
(RESET IC)
IC6004 (MN1280R)
+5V
SERIAL CLOCK
TO SERVO
QR6001
VIDEO E-E
LINE INPUT
TO VIDEO
QR6005
QR6006
P6003 2
CASSETTE LED
TO OPERATION
SP/LP
TO SERVO/AUDIO
STOP/FF/REW
DUTY CHANGE
X7
CAP ON/OFF/RESET
SLOW/STILL/STOP
CUE/REV
TO SERVO
FULL ERASE
C6020
CLEAR PULSE
DURING STOP MODE, THIS IS HIGH TO STOP THE COUNTER
QR6004
1/5 COUNT DOWN
IC6003 (MN4510BC)
CTL PULSE (25Hz)
IF THERE IS NO CTL SIGNAL, AUDIO SIGNAL WILL BE MUTED DURING PB MODE BY DETECTING CTL AT 29 PIN
RF IN
RF OUT
RF CONVERTER
TUNER
RF AMP
LOCAL OSC
MIXER
IF
AFC
BT BL BH BS2 BU
IC7551 (AN5043)
BAND SELECT
NV-FS1EB ONLY
L.P.F
T710
IF MATCHING TRANSFORMER
Q710
AMP
X710
TP707
X711
6.0MHz: B
5.5MHz: EB
TRAP
IC701 (M51366SP)
1ST IF AMP
2ND IF AMP
VIDEO DET
EQ
SIF DET.
APC DET
VCO
AFT
AMP
AUDIO OUT
VR741
FREQ. RESPONSE
REF V.
VIDEO OUT
T703
T704
AFC DET
IC7553 (MN4066B)
+12V
IC7552 (AN6913)
3.7V (EG)
6.7V (EG)
QR7559
QR7557
QR7556
IC7501 (MN15283VPY)
AFC DEF
BAND U
BAND VL
PWM OUT
SERIAL CLOCK
SERIAL DATA
P13
P12
(TUNER DATA MEMORY IC)
PCLR
QR7511
REG. 6V
RESET IC
IC7505 (MN1280T)
IC7502 (MN1228)
KEY BOARD
STOP
REW
FF
STILL
REC
A.DUB
PLAY
INSERT
EURO AV
AUDIO SELECT
MEMORY
RESET
EB ONLY
CH ↑
CH ↓
VPS
CLOCK
CHECK PRO
NEXT
SET UP
SET DOWN
OTR ON (+)
OTR OFF (−)
OTR OFF (+)
OTR OFF (−)
PRESET
AFC
CLEAR
EB ONLY
OPERATION C.B.A
EJECT
TIMER REC
POWER
P20 P21 P22 P23 P30 P31 P32 P33 P50 P51 P52 P53 P43 P42 P41 P40
BACK-UP
OSC 1
OSC 2
X7501
TIMER OSC
3.58MHz
SEG 0
SEG 8
SEGMENT SIGNALS
GRID F
GRID 0
GRID SIGNALS
VDD
X0
X1
X7502
32KHz
(FOR BACK-UP)
IRQ
RESET
IC7503 (MN1280P)
VPS SECTION
CPU CLOCK
CPU DATA2
CPU DATA1
P7507
P7803
SYS.5V
FROM DEMODULATOR
VIDEO SIGNAL
P7801
VPS/POWER2 C.B.A.(VEP

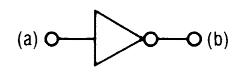

IC7553
(MN4066B)
+12V
IC7552
(AN6913)
3.7V (EG)
6.7V (EG)
+12V
QR7559
MN15283VPY)
OSC 1
OSC 2
TIMER OSC
X7501
3.58MHz
F Ⓗ
U
VL
OUT
SEG 0
SEGMENT SIGNALS
SEG 8
GRID F
CLOCK
DATA
GRID SIGNALS
GRID 0
VDD
X0
X1
X7502
32KHz
(FOR BACK-UP)
IRQ
RESET Ⓛ
BACK-UP
DP7501 VSL0113
15G
14G
13G
12G
11G
10G
9G
8G
7G
VTR
AV
CATV
SP
LP
SU
MO
TU
WE
TH
FR
SA
VPS
OTR
ON
REC
X2
COUNT
REMAIN
Mh
Di
Mg
Rc
Se
OFF
col
DP1
DP2
W
16G
7G
6G
5G
4G
2G
3G
2G
1G
3.9ms
30Vp-p
GRID 0
GRID 1
GRID 2
GRID 3
GRID 4
GRID 5
GRID 6
GRID 7
GRID 8
GRID 9
GRID A
GRID B
GRID C
GRID D
GRID E
GRID F
P7506 4
R7595
C7571
(BACK-UP CAPACITOR)
D7501
P7506 6
REG. 6V (FROM POWER)
IR RECIEVER C.B.A.(VEP06380E)
IC6701 (μPC1490HA)
VR6701
+5V
IC7503 (MN1280P)
REG 5V
VPS SECTION : EB ONLY
IC7851
(MN158412VYR)
RESET Ⓛ
VDD
SBT
SB0
SB1
RESET Ⓛ
CLK
DATA IN
DATA OUT
RESET Ⓛ
P7801 5
BACK-UP 5V
WHEN VPS SIGNAL DOESN'T COME TO IC7853-13 (ESPECIALLY OUTPUT SIG. AT IC7853-3 IS KEPT TO LOW), THIS IC7851 GENERATES LOW SIG.
SYS.5V
QR7801 ~ QR7802
IC7853 (SDA5642)
VDD
CPU CLOCK
CPU DATA2
CPU DATA 1
P7507
P7803
QR7851
QR7852
SYS.5V
VDD
RST Ⓛ
IC7852
(MN1280T)
TAKT-GENERATOR (PLL)
DATA SLICING
PRE-SCALER
SYNCHRON PULSE SEPARATOR
CBB-GENERATOR AND DECODER FOR LINE 16
BIPHASE CODE TEST START CODE TEST
SEQUENCE CONTROL
TEST-SIGNAL-GENERATOR
ADRESS-DEKODER
SCHIFT REGISTER 40BIT
TRANSMIT REGISTER BANK 5×8BITS
MULTIPLEXER
AUTOM RESET
I²C-BUS INTERFACE
FROM DEMODULATOR
VIDEO SIGNAL
P7801 2
VPS/POWER2 C.B.A.(VEP01355A: NV-FS1EB)
SERIAL DATA TRANSMISSION
STANDARD SERIAL CLOCK (IC6001-31)
SERVO SERIAL CLOCK (IC6001-32)
TIMER/DIGITAL SERIAL CLOCK (IC6001-34)
SERIAL DATA (IC6001-14)
B
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
Approx. 10ms
Approx. 10ms
NOT USED

SERIAL DATA TRANSMISSION

CLOCK NO.	DATA TRANSMISSION	CONTENTS OF DATA	CLOCK NO.	DATA TRANSMISSION	CONTENTS OF DATA
B	SYSTEM CONTROL → SERVO	CAP.CYL CONTROL	8	SYSTEM CONTROL → TIMER	COUNTER/TAPE REMAINING CODE
1	SYSTEM CONTROL → TIMER	TAPE REMAINING M/S DISPLAY, DEW	9	SYSTEM CONTROL → TIMER	COUNTER/TAPE REMAINING CODE
2	TIMER → SYSTEM CONTROL	WIRELESS REMOCON TIMER CODE	10	NOT USED	
3	TIMER → SYSTEM CONTROL	OPERATION KEY CODE	11	NOT USED	
4	NOT USED		12	NOT USED	
5	SYSTEM CONTROL → TIMER	PRESENT CONDITION OF VTR	13	NOT USED	
6	SYSTEM CONTROL → TIMER	POWER ON/OFF SLOW SPEED	14	NOT USED	
7	SYSTEM CONTROL → TIMER	COUNTER DISPLAY CODE/ TAPE REMAINING CODE	A	SYSTEM CONTROL → SERVO	SAME AS NO. B

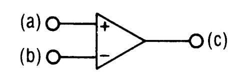
SYMBOL	TRUTH VALUE TABLE

INVERTER



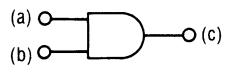
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



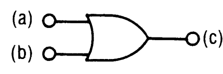
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



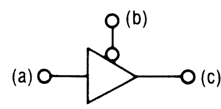
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

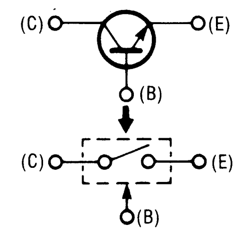
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

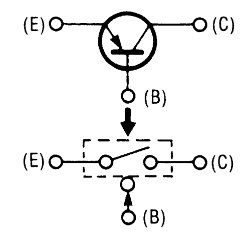
※ High Impedance

TR. SW (NPN TYPE)



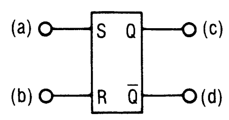
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

R-S TYPE FLIP-FLOP

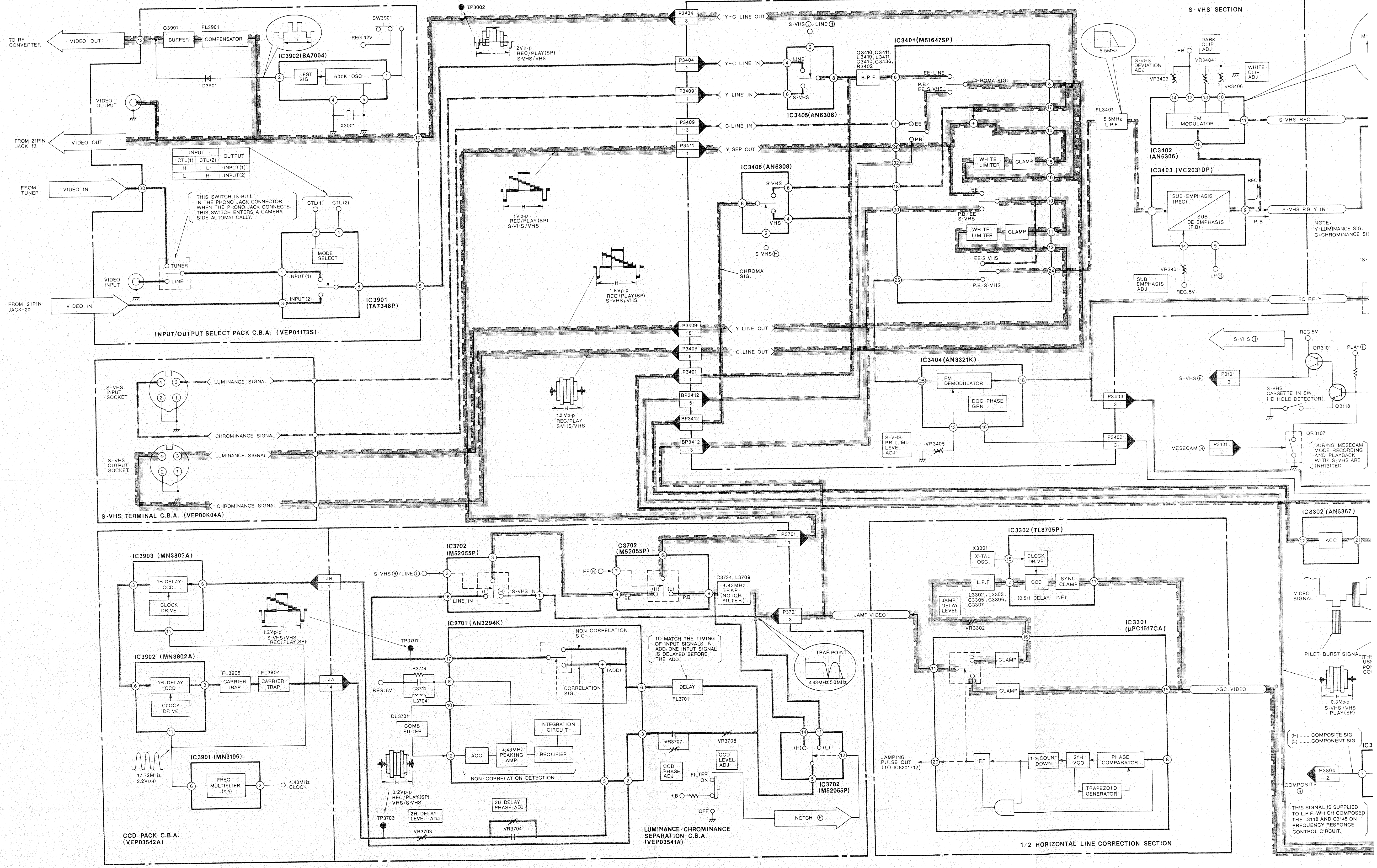


IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reverced.

3-2. S-VHS BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE (VHS) MAIN SIGNAL PATH IN REC MODE (S-VHS) MAIN

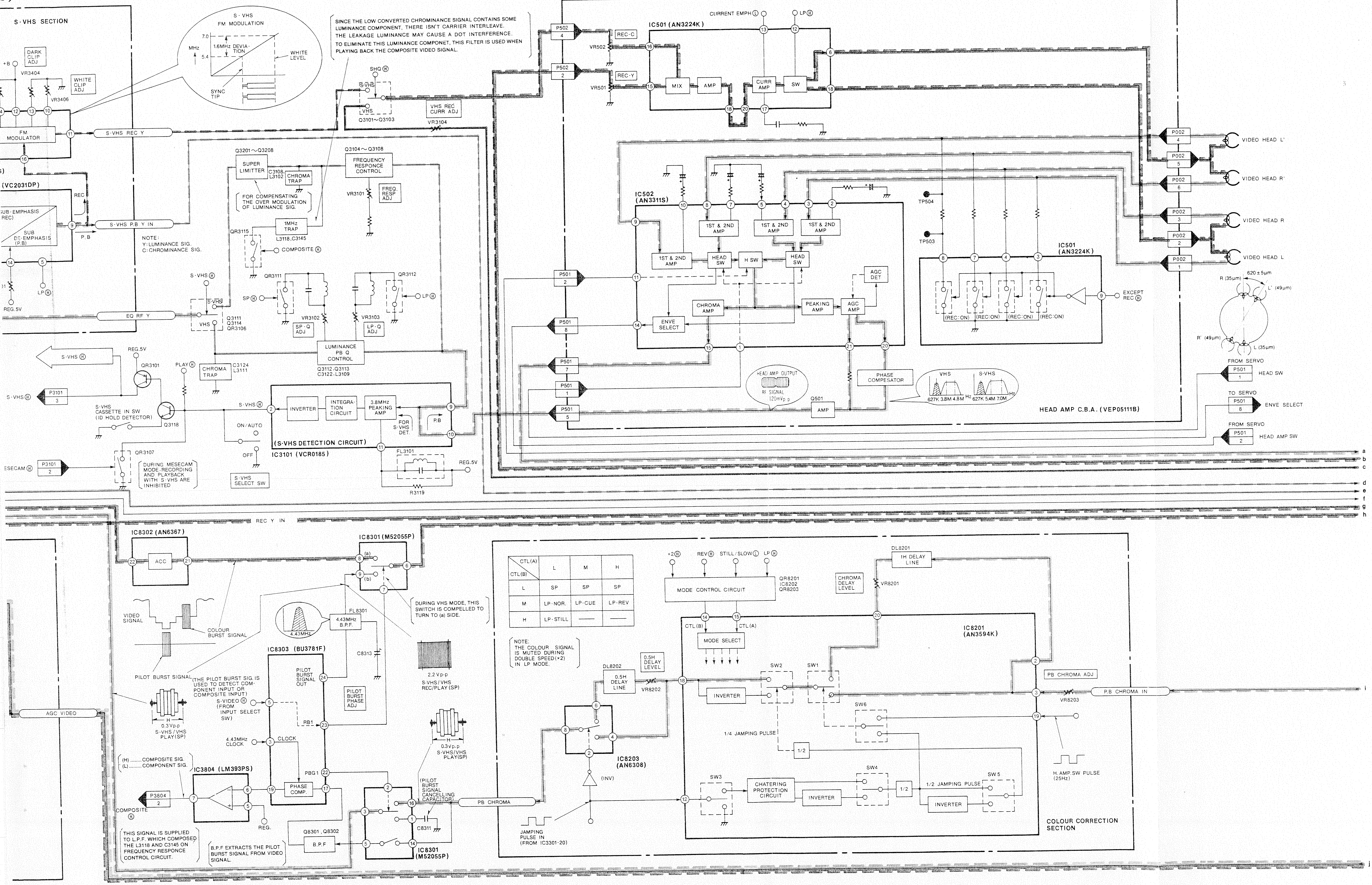


TO RF CONVERTER
VIDEO OUT
Q3901
BUFFER
FL3901
COMPENSATOR
SW3901
REG 12V
IC3902(BA7004)
TEST SIG
500K OSC
X3001
D3901
VIDEO OUTPUT
FROM 21PIN JACK-19
VIDEO OUT
INPUT
CTL(1)
CTL(2)
OUTPUT
H
L
INPUT(1)
INPUT(2)
FROM TUNER
VIDEO IN
THIS SWITCH IS BUILT IN THE PHONO JACK CONNECTOR. WHEN THE PHONO JACK CONNECTS, THIS SWITCH ENTERS A CAMERA SIDE AUTOMATICALLY.
TUNER
LINE
MODE SELECT
VIDEO INPUT
FROM 21PIN JACK-20
VIDEO IN
IC3901 (TA7348P)
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)
TP3002
2Vp-p REC/PLAY(SP) S-VHS/VHS
1Vp-p REC/PLAY(SP) S-VHS/VHS
1.8Vp-p REC/PLAY(SP) S-VHS/VHS
1.2Vp-p REC/PLAY S-VHS/VHS
P3404
P3409
P3411
P3401
BP3412
Y+C LINE OUT
Y+C LINE IN
Y LINE IN
C LINE IN
Y SEP OUT
Y LINE OUT
C LINE OUT
S-VHS(L)/LINE(H)
IC3405(AN6308)
IC3406(AN6308)
CHROMA SIG.
IC3401(M51647SP)
Q3410, Q3411, L3410, L3411, C3410, C3436, R3402
B.P.F.
EE-LINE
P.B/EE-S-VHS
EE
P.B
WHITE LIMITER
CLAMP
P.B/EE S-VHS
EE-S-VHS
P.B-S-VHS
IC3404(AN3321K)
FM DEMODULATOR
DOC PHASE GEN.
S-VHS P.B LUMI. LEVEL ADJ
VR3405
S-VHS SECTION
5.5MHz
FL3401
5.5MHz L.P.F.
S-VHS DEVIATION ADJ
VR3403
DARK CLIP ADJ
VR3404
WHITE CLIP ADJ
VR3406
FM MODULATOR
S-VHS REC Y
IC3402 (AN6306)
IC3403 (VC2031DP)
SUB-EMPHASIS (REC)
SUB DE-EMPHASIS (P.B)
REC
P.B
S-VHS P.B Y IN
NOTE: Y:LUMINANCE SIG. C:CHROMINANCE SI
VR3401
SUB-EMPHASIS ADJ
REG.5V
LP(H)
EQ RF Y
S-VHS(H)
REG.5V
QR3101
PLAY(H)
P3101
S-VHS CASSETTE IN SW (ID HOLD DETECTOR)
Q3118
P3403
P3402
MESECAM(H)
QR3107
DURING MESECAM MODE-RECORDING AND PLAYBACK WITH S-VHS ARE INHIBITED
S-VHS INPUT SOCKET
LUMINANCE SIGNAL
CHROMINANCE SIGNAL
S-VHS OUTPUT SOCKET
S-VHS TERMINAL C.B.A. (VEP00K04A)
IC3903 (MN3802A)
1H DELAY CCD
CLOCK DRIVE
JB
1.2Vp-p S-VHS/VHS REC/PLAY(SP)
IC3902 (MN3802A)
FL3906
CARRIER TRAP
FL3904
JA
IC3901 (MN3106)
FREQ. MULTIPLIER (×4)
17.72MHz 2.2Vp-p
4.43MHz CLOCK
CCD PACK C.B.A. (VEP03542A)
IC3702 (M52055P)
S-VHS(H)/LINE(L)
LINE IN
S-VHS IN
EE(H)
TP3701
IC3701 (AN3294K)
R3714
C3711
L3704
REG.5V
DL3701
COMB FILTER
ACC
4.43MHz PEAKING AMP
RECTIFIER
INTEGRATION CIRCUIT
NON-CORRELATION SIG.
CORRELATION SIG.
(ADD)
NON-CORRELATION DETECTION
TO MATCH THE TIMING OF INPUT SIGNALS IN ADD, ONE INPUT SIGNAL IS DELAYED BEFORE THE ADD.
DELAY
FL3701
C3734, L3709
4.43MHz TRAP (NOTCH FILTER)
P3701
JAMP VIDEO
TRAP POINT
4.43MHz 5.0MHz
VR3707
VR3708
CCD LEVEL ADJ
CCD PHASE ADJ
FILTER ON
OFF
NOTCH (H)
0.2Vp-p REC/PLAY(SP) VHS/S-VHS
TP3703
2H DELAY LEVEL ADJ
VR3703
2H DELAY PHASE ADJ
VR3704
LUMINANCE/CHROMINANCE SEPARATION C.B.A. (VEP03541A)
IC3302 (TL8705P)
X3301 X-TAL OSC
CLOCK DRIVE
L.P.F.
CCD
SYNC CLAMP
(0.5H DELAY LINE)
JAMP DELAY LEVEL
L3302, L3303, C3305, C3306, C3307
VR3302
IC3301 (μPC1517CA)
CLAMP
AGC VIDEO
JAMPING PULSE OUT (TO IC8201-12)
FF
1/2 COUNT DOWN
2fH VCO
PHASE COMPARATOR
TRAPEZOID GENERATOR
1/2 HORIZONTAL LINE CORRECTION SECTION
IC8302 (AN6367)
ACC
VIDEO SIGNAL
PILOT BURST SIGNAL
0.3Vp-p S-VHS/VHS PLAY(SP)
(H)........COMPOSITE SIG.
(L)........COMPONENT SIG.
P3604
COMPOSITE (H)
THIS SIGNAL IS SUPPLIED TO L.P.F. WHICH COMPOSED THE L3118 AND C3145 ON FREQUENCY RESPONCE CONTROL CIRCUIT.

Back Page:
SYSTEM CONTROL Section

MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)

MAIN SIGNAL PATH IN PLAYBACK MODE (S-VHS)


S)
S-VHS SECTION
DARK CLIP ADJ
VR3404
WHITE CLIP ADJ
VR3406
FM MODULATOR
S-VHS REC Y
(VC2031DP)
SUB-EMPHASIS (REC)
SUB DE-EMPHASIS (P.B)
S-VHS P.B Y IN
P.B
REC
LP Ⓗ
REG.5V
S-VHS FM MODULATION
MHz
7.0
5.4
1.6MHz DEVIATION
WHITE LEVEL
SYNC TIP
SHQ Ⓗ
S-VHS
VHS
Q3101~Q3103
VHS REC CURR ADJ
VR3104
Q3201~Q3208
SUPER LIMITTER
L3108, L3102
CHROMA TRAP
Q3104~Q3108
FREQUENCY RESPONCE CONTROL
FREQ RESP ADJ
VR3101
FOR COMPENSATING THE OVER MODULATION OF LUMINANCE SIG.
1MHz TRAP
L3118, C3145
QR3115
COMPOSITE Ⓗ
NOTE: Y: LUMINANCE SIG. C: CHROMINANCE SIG.
S-VHS Ⓗ
QR3111
QR3112
SP Ⓗ
LP Ⓗ
EQ RF Y
Q3111 Q3114 QR3106
VR3102
SP-Q ADJ
VR3103
LP-Q ADJ
LUMINANCE PB Q CONTROL
Q3112, Q3113 C3122, L3109
S-VHS Ⓗ
REG.5V
QR3101
PLAY Ⓗ
CHROMA TRAP
C3124 L3111
P3101 3
S-VHS CASSETTE IN SW (ID HOLD DETECTOR)
Q3118
S-VHS Ⓗ
INVERTER
INTEGRATION CIRCUIT
3.8MHz PEAKING AMP
FOR S-VHS DET.
P.B
ON/AUTO
OFF
(S-VHS DETECTION CIRCUIT)
IC3101 (VCR0185)
FL3101
REG.5V
R3119
MESECAM Ⓗ
P3101 2
QR3107
DURING MESECAM MODE, RECORDING AND PLAYBACK WITH S-VHS ARE INHIBITED
S-VHS SELECT SW
P502 4
P502 2
VR502
VR501
REC-C
REC-Y
CURRENT EMPH Ⓛ
LP Ⓗ
IC501 (AN3224K)
MIX
AMP
CURR AMP
SW
P002 4 5 6 3 2 1
VIDEO HEAD L'
VIDEO HEAD R'
VIDEO HEAD R
VIDEO HEAD L
IC502 (AN3311S)
1ST & 2ND AMP
HEAD SW
H SW
CHROMA AMP
ENVE SELECT
PEAKING AMP
AGC AMP
AGC DET
PHASE COMPESATOR
TP504
TP503
IC501 (AN3224K)
EXCEPT REC Ⓗ
(REC:ON)
P501 2 8 7 1 5
HEAD AMP OUTPUT RF SIGNAL 120mVp-p
Q501 AMP
VHS S-VHS
627K 3.8M 4.8M Hz 627K 5.4M 7.0M Hz
HEAD AMP C.B.A. (VEP05111B)
R (35μm)
620±5μm
L' (49μm)
R' (49μm)
L (35μm)
FROM SERVO P501 1 HEAD SW
TO SERVO P501 8 ENVE SELECT
FROM SERVO P501 2 HEAD AMP SW
a b c d e f g h i j
REC Y IN
IC8302 (AN6367)
ACC
IC8301 (M52055P)
(a) (b)
VIDEO SIGNAL
COLOUR BURST SIGNAL
PILOT BURST SIGNAL
4.43MHz
FL8301 4.43MHz B.P.F.
C8313
IC8303 (BU3781F)
PILOT BURST SIGNAL OUT
PILOT BURST PHASE ADJ
2.2 Vp-p S-VHS/VHS REC/PLAY (SP)
H 0.3Vp-p S-VHS/VHS PLAY(SP)
S-VIDEO Ⓗ (FROM INPUT SELECT SW)
RB1
4.43MHz CLOCK
CLOCK
PBG1
PHASE COMP.
(H) ....COMPOSITE SIG. (L) ....COMPONENT SIG.
IC3804 (LM393PS)
P3804 2
COMPOSITE Ⓗ
REG.
Q8301, Q8302
B.P.F
IC8301 (M52055P)
C8311
(PILOT BURST SIGNAL CANCELLING CAPACITOR)
PB CHROMA
AGC VIDEO
×2 Ⓗ
REV Ⓗ
STILL/SLOW Ⓛ
LP Ⓗ
MODE CONTROL CIRCUIT
QR8201 IC8202 QR8203
DL8201 1H DELAY LINE
CHROMA DELAY LEVEL
VR8201
CTL(B) CTL(A)
MODE SELECT
IC8201 (AN3594K)
DL8202 0.5H DELAY LINE
0.5H DELAY LEVEL
VR8202
SW2 SW1
INVERTER
PB CHROMA ADJ
VR8203
P.B CHROMA IN
SW6
1/4 JAMPING PULSE
1/2
IC8203 (AN6308)
(INV)
SW3
CHATERING PROTECTION CIRCUIT
SW4
INVERTER
1/2 JAMPING PULSE
SW5
INVERTER
H. AMP. SW PULSE (25Hz)
JAMPING PULSE IN (FROM IC3301-20)
COLOUR CORRECTION SECTION

SINCE THE LOW CONVERTED CHROMINANCE SIGNAL CONTAINS SOME LUMINANCE COMPONENT, THERE ISN'T CARRIER INTERLEAVE. THE LEAKAGE LUMINANCE MAY CAUSE A DOT INTERFERENCE. TO ELIMINATE THIS LUMINANCE COMPONET, THIS FILTER IS USED WHEN PLAYING BACK THE COMPOSITE VIDEO SIGNAL.

(THE PILOT BURST SIG. IS USED TO DETECT COMPONENT INPUT OR COMPOSITE INPUT)

THIS SIGNAL IS SUPPLIED TO L.P.F. WHICH COMPOSED THE L3118 AND C3145 ON FREQUENCY RESPONCE CONTROL CIRCUIT.

B.P.F EXTRACTS THE PILOT BURST SIGNAL FROM VIDEO SIGNAL.

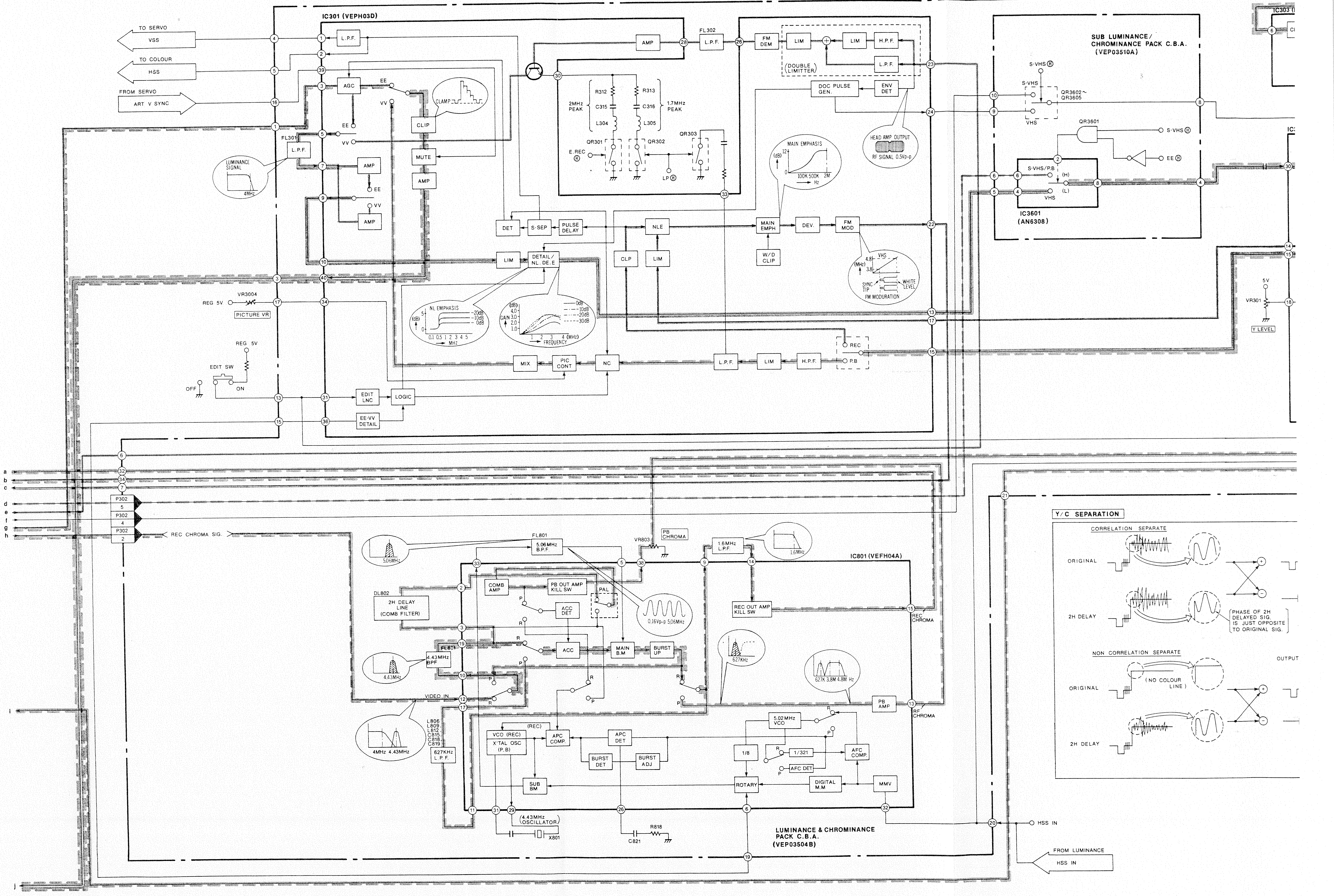
DURING VHS MODE, THIS SWITCH IS COMPELLED TO TURN TO (a) SIDE.

CTL(A) / CTL(B)	L	M	H
L	SP	SP	SP
M	LP-NOR.	LP-CUE	LP-REV
H	LP-STILL	——	——

NOTE:
THE COLOUR SIGNAL IS MUTED DURING DOUBLE SPEED(×2) IN LP MODE.

3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

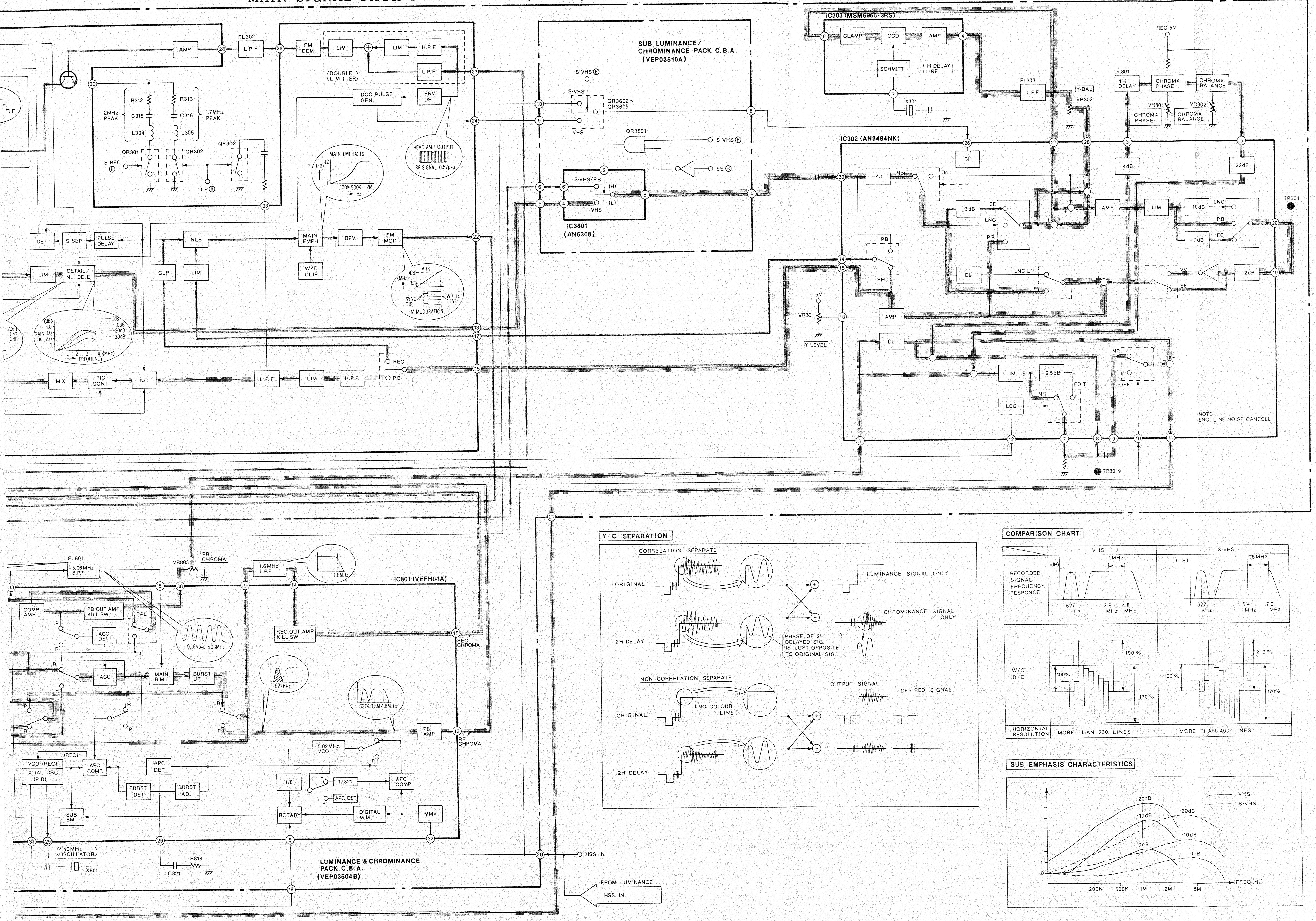
MAIN SIGNAL PATH IN REC MODE (VHS)
MAIN SIGNAL PATH IN REC MODE (S-VHS)



IC301 (VEPH03D)
TO SERVO
VSS
TO COLOUR
HSS
FROM SERVO
ART V SYNC
L.P.F.
AGC
EE
VV
CLAMP
CLIP
MUTE
AMP
FL301
LUMINANCE SIGNAL
4MHz
AMP
FL302
FM DEM
LIM
H.P.F.
(DOUBLE LIMITTER)
DOC PULSE GEN.
ENV DET
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
R312
R313
2MHz PEAK
C315
C316
1.7MHz PEAK
L304
L305
QR301
QR302
QR303
E.REC H
LP H
MAIN EMPHASIS
(dB)
12
100K 500K 2M Hz
DET
S-SEP
PULSE DELAY
NLE
MAIN EMPH
DEV.
FM MOD
4.8
3.8
(MHz)
VHS
SYNC TIP
WHITE LEVEL
FM MODURATION
W/D CLIP
CLP
LIM
DETAIL/ NL. DE.E
NL EMPHASIS
(dB)
5
0
-20dB
-10dB
-0dB
0.1 0.5 1 2 3 4 5
MHz
GAIN
4.0
3.0
2.0
1.0
0dB
-10dB
-20dB
-30dB
1 2 3 4 (MHz)
FREQUENCY
REG 5V
VR3004
PICTURE VR
REG 5V
EDIT SW
OFF
ON
EDIT LNC
LOGIC
EE-VV DETAIL
MIX
PIC CONT
NC
L.P.F.
LIM
H.P.F.
REC
P.B
SUB LUMINANCE/ CHROMINANCE PACK C.B.A. (VEP03510A)
S-VHS H
S-VHS
VHS
QR3602~ QR3605
QR3601
S-VHS H
EE H
S-VHS/P.B
(H)
(L)
IC3601 (AN6308)
IC303
5V
VR301
Y LEVEL
a
b
c
d
e
f
g
h
P302
5
P302
4
P302
2
REC CHROMA SIG.
i
j
FL801
5.06MHz B.P.F.
5.06MHz
VR803
PB CHROMA
1.6MHz L.P.F.
1.6MHz
IC801 (VEFH04A)
DL802
2H DELAY LINE (COMB FILTER)
COMB AMP
PB OUT AMP KILL SW
PAL
ACC DET
0.16Vp-p 5.06MHz
REC OUT AMP KILL SW
REC CHROMA
ACC
MAIN B.M
BURST UP
FL801
4.43MHz BPF
4.43MHz
627KHz
627K 3.8M 4.8M Hz
VIDEO IN
PB AMP
RF CHROMA
4MHz 4.43MHz
L806 L809 L812 C815 C818 C819
627KHz L.P.F.
VCO (REC)
X'TAL OSC (P.B)
(REC)
APC COMP.
APC DET
BURST DET
BURST ADJ
5.02MHz VCO
1/8
1/321
AFC DET
AFC COMP.
SUB BM
ROTARY
DIGITAL M.M
MMV
(4.43MHz OSCILLATOR)
X801
R818
C821
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)
HSS IN
FROM LUMINANCE
HSS IN
Y/C SEPARATION
CORRELATION SEPARATE
ORIGINAL
2H DELAY
PHASE OF 2H DELAYED SIG. IS JUST OPPOSITE TO ORIGINAL SIG.
NON CORRELATION SEPARATE
(NO COLOUR LINE)
OUTPUT

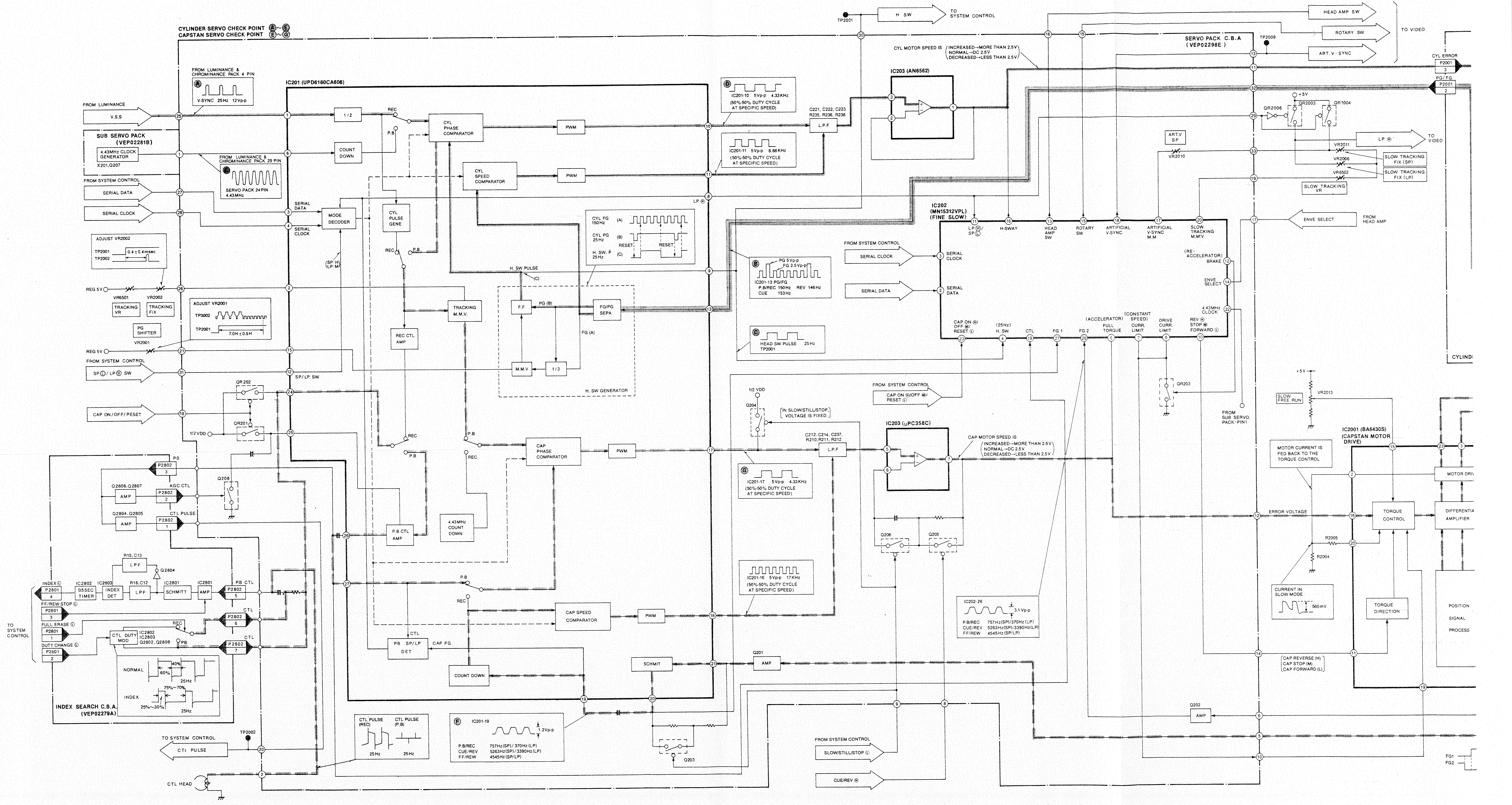
RAM

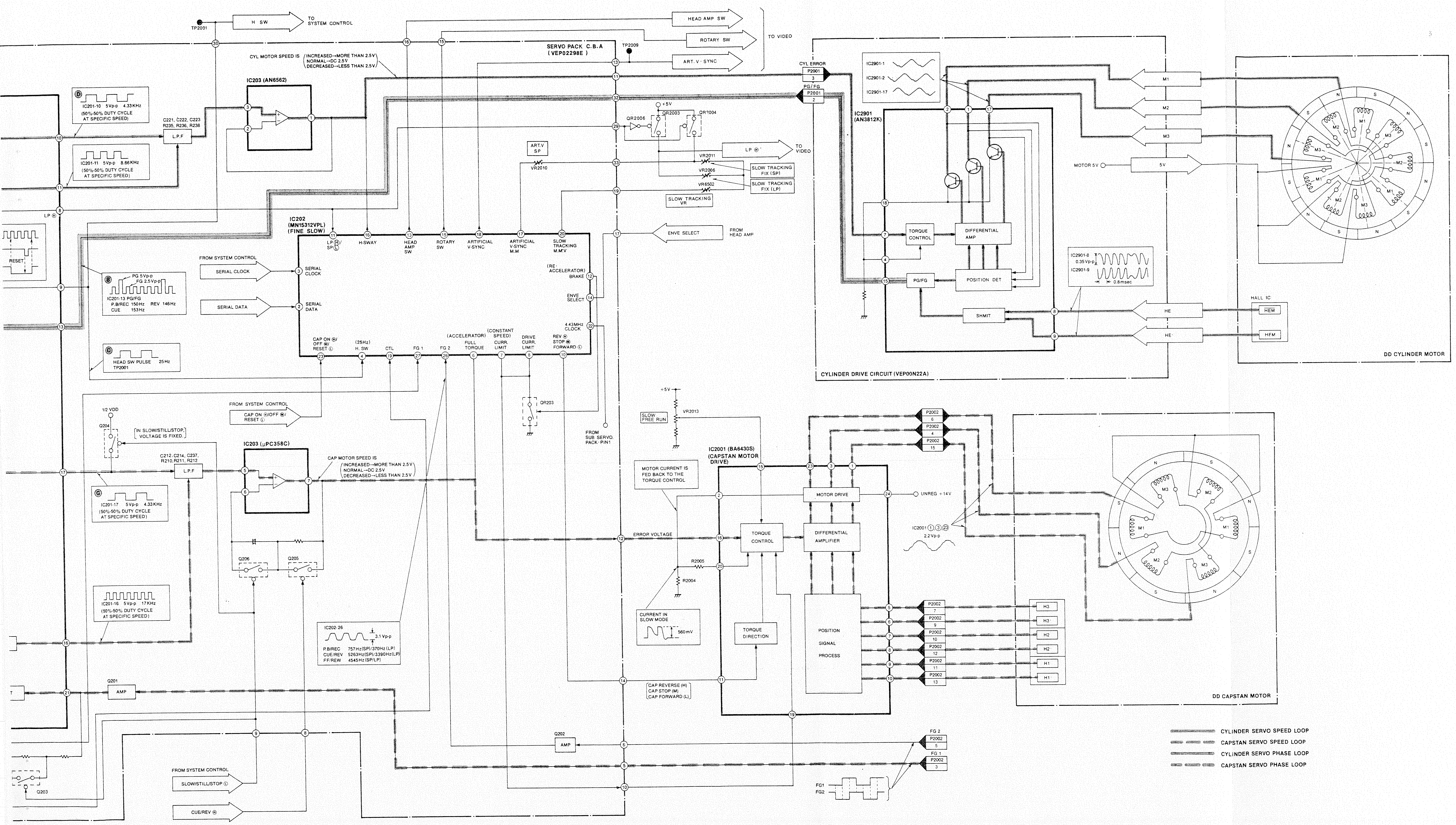
MAIN SIGNAL PATH IN REC MODE (VHS)
MAIN SIGNAL PATH IN REC MODE (S-VHS)
MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)
MAIN SIGNAL PATH IN PLAYBACK MODE (S-VHS)


FL302
L.P.F.
AMP
FM DEM
LIM
H.P.F.
(DOUBLE LIMITTER)
DOC PULSE GEN.
ENV DET
R312
R313
2MHz PEAK
C315
C316
1.7MHz PEAK
L304
L305
QR301
QR302
QR303
E.REC
LP
MAIN EMPHASIS
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
DET
S-SEP
PULSE DELAY
NLE
MAIN EMPH
DEV.
FM MOD
W/D CLIP
CLP
DETAIL/NL.DE.E
SYNC TIP
WHITE LEVEL
FM MODURATION
FREQUENCY
MIX
PIC CONT
NC
REC
P.B
SUB LUMINANCE/CHROMINANCE PACK C.B.A. (VEP03510A)
S-VHS
QR3602~QR3605
QR3601
S-VHS/P.B
EE
IC3601 (AN6308)
IC303 (MSM6965-3RS)
CLAMP
CCD
SCHMITT
(1H DELAY LINE)
X301
FL303
Y.BAL
VR302
IC302 (AN3494NK)
REG 5V
DL801
1H DELAY
CHROMA PHASE
CHROMA BALANCE
VR801
VR802
4dB
22dB
-4.1
-3dB
LNC
LIM
-10dB
-7dB
-12dB
TP301
DL
LNC LP
VR301
Y LEVEL
-9.5dB
EDIT
NR
OFF
LOG
TP8019
NOTE: LNC: LINE NOISE CANCELL
FL801
5.06MHz B.P.F.
VR803
PB CHROMA
1.6MHz L.P.F.
IC801 (VEFH04A)
COMB AMP
PB OUT AMP KILL SW
PAL
ACC DET
ACC
MAIN B.M
BURST UP
0.16Vp-p 5.06MHz
REC OUT AMP KILL SW
REC CHROMA
627KHz
627K 3.8M 4.8M Hz
PB AMP
RF CHROMA
VCO (REC)
X'TAL OSC (P.B)
APC COMP
APC DET
BURST DET
BURST ADJ
5.02MHz VCO
1/8
1/321
AFC DET
AFC COMP
SUB BM
ROTARY
DIGITAL M.M
MMV
(4.43MHz OSCILLATOR)
X801
C821
R818
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)
HSS IN
FROM LUMINANCE
Y/C SEPARATION
CORRELATION SEPARATE
ORIGINAL
2H DELAY
LUMINANCE SIGNAL ONLY
CHROMINANCE SIGNAL ONLY
PHASE OF 2H DELAYED SIG. IS JUST OPPOSITE TO ORIGINAL SIG.
NON CORRELATION SEPARATE
(NO COLOUR LINE)
OUTPUT SIGNAL
DESIRED SIGNAL
COMPARISON CHART
VHS
S-VHS
RECORDED SIGNAL FREQUENCY RESPONCE
627 KHz
3.8 MHz
4.8 MHz
5.4 MHz
7.0 MHz
1MHz
1.6MHz
W/C D/C
100%
190%
170%
210%
HORIZONTAL RESOLUTION
MORE THAN 230 LINES
MORE THAN 400 LINES
SUB EMPHASIS CHARACTERISTICS
: VHS
: S-VHS
-20dB
-10dB
0dB
FREQ (Hz)
200K
500K
1M
2M
5M

Next Page:
SERVO Section

3-4. SERVO BLOCK DIAGRAM

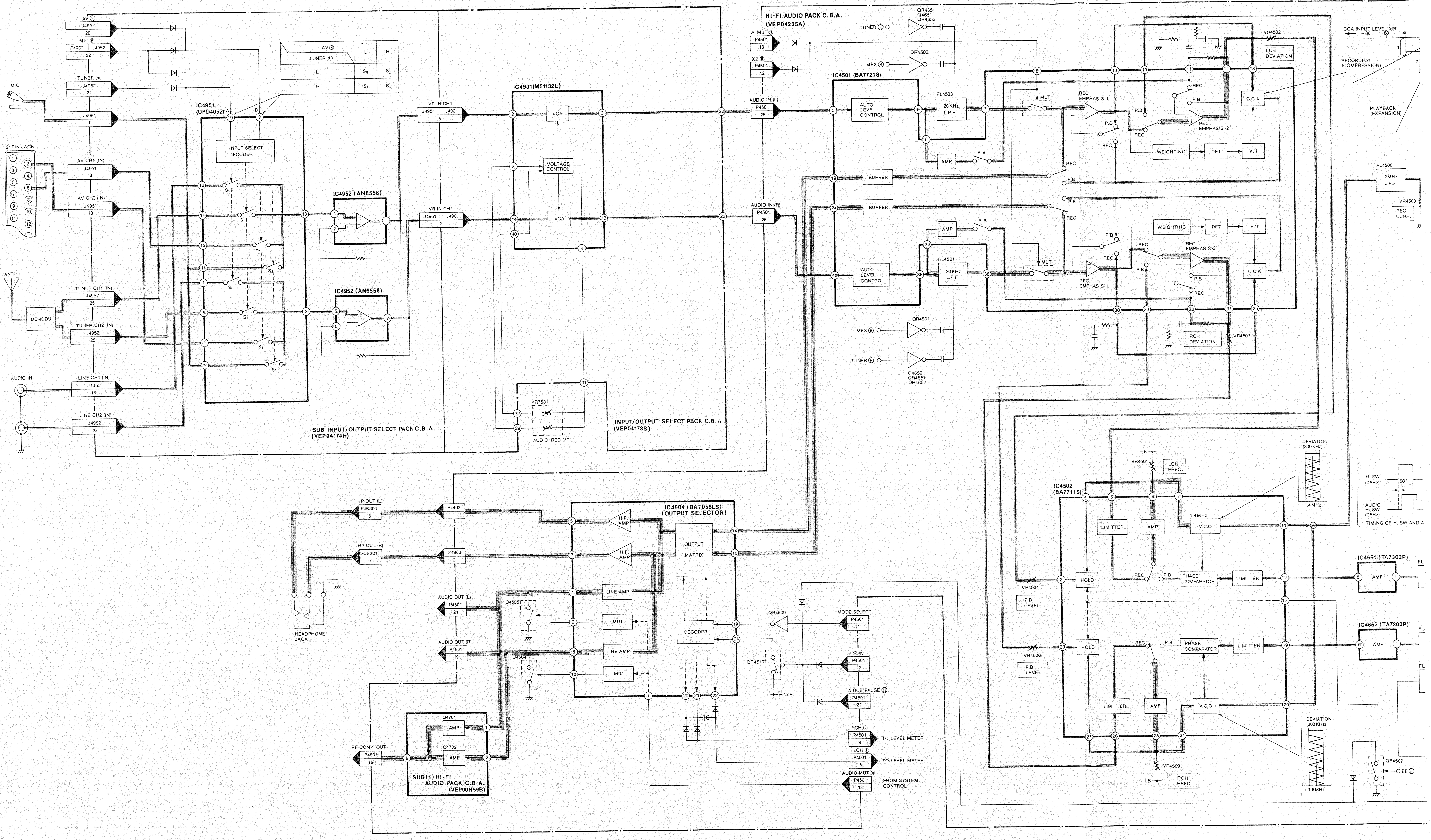

CYLINDER SERVO CHECK POINT Ⓐ~Ⓔ
CAPSTAN SERVO CHECK POINT Ⓔ~Ⓖ
FROM LUMINANCE & CHROMINANCE PACK 4 PIN
Ⓐ V-SYNC 25Hz 12Vp-p
IC201 (UPD6160CA606)
FROM LUMINANCE
V.S.S
SUB SERVO PACK (VEP02281B)
4.43MHz CLOCK GENERATOR
X201,Q207
FROM LUMINANCE & CHROMINANCE PACK 29 PIN
SERVO PACK 24 PIN 4.43MHz
FROM SYSTEM CONTROL
SERIAL DATA
SERIAL CLOCK
ADJUST VR2002
TP2001
TP2002
0.4±0.4msec
REG 5V
VR6501
VR2002
TRACKING VR
TRACKING FIX
PG SHIFTER
VR2001
ADJUST VR2001
TP3002
7.0H±0.5H
SP Ⓛ / LP Ⓗ SW
SP/LP SW
(SP:H) (LP:M)
CAP ON/OFF/RESET
QR202
QR201
1/2 VDD
1/2
REC
P.B
COUNT DOWN
MODE DECODER
CYL PHASE COMPARATOR
CYL SPEED COMPARATOR
PWM
CYL PULSE GENE
REC CTL AMP
TRACKING M.M.V.
H. SW PULSE
(C)
F.F
PG (B)
FG/PG SEPA
FG (A)
M.M.V
1/3
H. SW GENERATOR
CYL FG 150Hz (A)
CYL PG 25Hz (B)
RESET
H. SW. P 25Hz (C)
LP Ⓗ
CAP PHASE COMPARATOR
CAP SPEED COMPARATOR
4.43MHz COUNT DOWN
P.B CTL AMP
PB SP/LP DET
CAP FG
CTL
COUNT DOWN
SCHMIT
P0
P2802
AGC CTL
Q2806,Q2807
AMP
Q2804,Q2805
CTL PULSE
Q208
R15,C13
LPF
Q2804
INDEX Ⓛ
P2801
IC2802
0.5SEC TIMER
IC2803
INDEX DET
R16,C12
IC2801
SCHMITT
PB CTL
FF/REW STOP Ⓛ
FULL ERASE Ⓛ
DUTY CHANGE Ⓛ
TO SYSTEM CONTROL
CTL DUTY MOD
IC2802
IC2803
Q2802,Q2808
PB
NORMAL
40%
60%
25Hz
INDEX
75%~70%
25%~30%
INDEX SEARCH C.B.A. (VEP02279A)
TO SYSTEM CONTROL
TP2002
CTL PULSE
CTL HEAD
CTL PULSE (REC)
CTL PULSE (P.B)
25Hz
Ⓕ IC201-19
1.2Vp-p
P.B/REC 757Hz(SP)/370Hz(LP)
CUE/REV 5263Hz(SP)/3390Hz(LP)
FF/REW 4545Hz(SP/LP)
TP2001
H SW
TO SYSTEM CONTROL
Ⓓ IC201-10 5Vp-p 4.33KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
IC201-11 5Vp-p 8.66KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
C221, C222, C223
R235, R236, R238
L.P.F
CYL MOTOR SPEED IS
(INCREASED→MORE THAN 2.5V
NORMAL→DC 2.5V
DECREASED→LESS THAN 2.5V)
IC203 (AN6562)
Ⓑ PG 5Vp-p FG 2.5Vp-p
IC201-13 PG/FG
P.B/REC 150Hz REV 146Hz
CUE 153Hz
Ⓒ HEAD SW PULSE 25Hz
TP2001
IC202 (MN15312VPL) (FINE SLOW)
LP Ⓗ/SP Ⓛ
H-SWAY
HEAD AMP SW
ROTARY SW
ARTIFICIAL V-SYNC
ARTIFICIAL V-SYNC M.M
SLOW TRACKING M.M.V
(RE-ACCELERATOR) BRAKE
ENVE SELECT
4.43MHz CLOCK
REV Ⓗ
STOP Ⓜ
FORWARD Ⓛ
DRIVE CURR. LIMIT
(CONSTANT SPEED) CURR. LIMIT
(ACCELERATOR) FULL TORQUE
FG 2
FG 1
CTL
(25Hz) H. SW
CAP ON Ⓗ/OFF Ⓜ/RESET Ⓛ
SERIAL CLOCK
SERIAL DATA
FROM SYSTEM CONTROL
HEAD AMP SW
ROTARY SW
ART. V · SYNC
TO VIDEO
SERVO PACK C.B.A (VEP02298E)
TP2009
CYL ERROR
P2001
PG/FG
QR2006
QR2003
QR2004
+5V
LP Ⓗ
TO VIDEO
ART.V SP
VR2010
VR2011
VR2006
VR6502
SLOW TRACKING FIX (SP)
SLOW TRACKING FIX (LP)
SLOW TRACKING VR
ENVE SELECT
FROM HEAD AMP
CYLIND
QR203
FROM SUB SERVO. PACK-PIN1
SLOW FREE RUN
VR2013
FROM SYSTEM CONTROL
CAP ON Ⓗ/OFF Ⓜ/RESET Ⓛ
Q204
[IN SLOW/STILL/STOP, VOLTAGE IS FIXED.]
IC203 (µPC358C)
C212, C214, C237, R210, R211, R212
CAP MOTOR SPEED IS
(INCREASED→MORE THAN 2.5V
NORMAL→DC 2.5V
DECREASED→LESS THAN 2.5V)
Ⓖ IC201-17 5Vp-p 4.33KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
Q206
Q205
IC201-16 5Vp-p 17KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
IC202-26
3.1Vp-p
P.B/REC 757Hz(SP)/370Hz(LP)
CUE/REV 5263Hz(SP)/3390Hz(LP)
FF/REW 4545Hz(SP/LP)
Q201
AMP
Q203
FROM SYSTEM CONTROL
SLOW/STILL/STOP Ⓛ
CUE/REV Ⓗ
Q202
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
IC2001 (BA6430S) (CAPSTAN MOTOR DRIVE)
ERROR VOLTAGE
R2005
R2004
CURRENT IN SLOW MODE
560mV
TORQUE CONTROL
TORQUE DIRECTION
MOTOR DRIV
DIFFERENTIA AMPLIFIER
POSITION SIGNAL PROCESS
(CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L))
FG1
FG2


TP2001
H SW
TO SYSTEM CONTROL
HEAD AMP SW
ROTARY SW
ART. V · SYNC
TO VIDEO
SERVO PACK C.B.A (VEP02298E)
TP2009
CYL MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
IC203 (AN6562)
IC201-10 5Vp-p 4.33KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
C221, C222, C223 R235, R236, R238
L.P.F
IC201-11 5Vp-p 8.66KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
LP
RESET
+5V
QR2006
QR2003
QR2004
LP
TO VIDEO
ART.V S.P
VR2010
VR2011
VR2006
VR6502
SLOW TRACKING FIX (SP)
SLOW TRACKING FIX (LP)
SLOW TRACKING VR
IC202 (MN15312VPL) (FINE SLOW)
LP (H) / SP (L)
H-SWAY
HEAD AMP SW
ROTARY SW
ARTIFICIAL V-SYNC
ARTIFICIAL V-SYNC M.M
SLOW TRACKING M.M.V
ENVE SELECT
FROM HEAD AMP
FROM SYSTEM CONTROL
SERIAL CLOCK
SERIAL DATA
PG 5Vp-p
FG 2.5Vp-p
IC201-13 PG/FG
P.B/REC 150Hz REV 146Hz
CUE 153Hz
(RE-ACCELERATOR) BRAKE
ENVE SELECT
4.43MHz CLOCK
CAP ON (H)/OFF (M)/RESET (L)
(25Hz) H. SW
CTL
FG 1
FG 2
(ACCELERATOR) FULL TORQUE
(CONSTANT SPEED) CURR. LIMIT
DRIVE CURR. LIMIT
REV (H) STOP (M) FORWARD (L)
HEAD SW PULSE 25Hz TP2001
QR203
FROM SUB SERVO. PACK · PIN1
FROM SYSTEM CONTROL
CAP ON (H)/OFF (M) RESET (L)
1/2 VDD
Q204
IN SLOW/STILL/STOP, VOLTAGE IS FIXED.
C212, C214, C237, R210, R211, R212
L.P.F
IC203 (μPC358C)
CAP MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
IC201-17 5Vp-p 4.33KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
Q206
Q205
IC201-16 5Vp-p 17KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
IC202-26 3.1Vp-p
P.B/REC 757Hz(SP)/370Hz(LP)
CUE/REV 5263Hz(SP)/3390Hz(LP)
FF/REW 4545Hz(SP/LP)
Q201
AMP
Q202
AMP
Q203
FROM SYSTEM CONTROL
SLOW/STILL/STOP (L)
CUE/REV (H)
CYL ERROR
P2001
PG/FG
IC2901-1
IC2901-2
IC2901-17
IC2901 (AN3812K)
M1
M2
M3
MOTOR 5V
5V
TORQUE CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SHMIT
IC2901-8 0.35Vp-p
IC2901-9 0.8msec
HE
HALL IC
HEM
HFM
CYLINDER DRIVE CIRCUIT (VEP00N22A)
DD CYLINDER MOTOR
N
S
+5V
SLOW FREE RUN
VR2013
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
IC2001 (BA6430S) (CAPSTAN MOTOR DRIVE)
P2002
MOTOR DRIVE
UNREG +14V
IC2001 ① ③ ㉓ 2.2Vp-p
ERROR VOLTAGE
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
R2005
R2004
CURRENT IN SLOW MODE 560mV
TORQUE DIRECTION
POSITION SIGNAL PROCESS
CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L)
H3
H2
H1
DD CAPSTAN MOTOR
FG 2
FG 1
FG1
FG2
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP

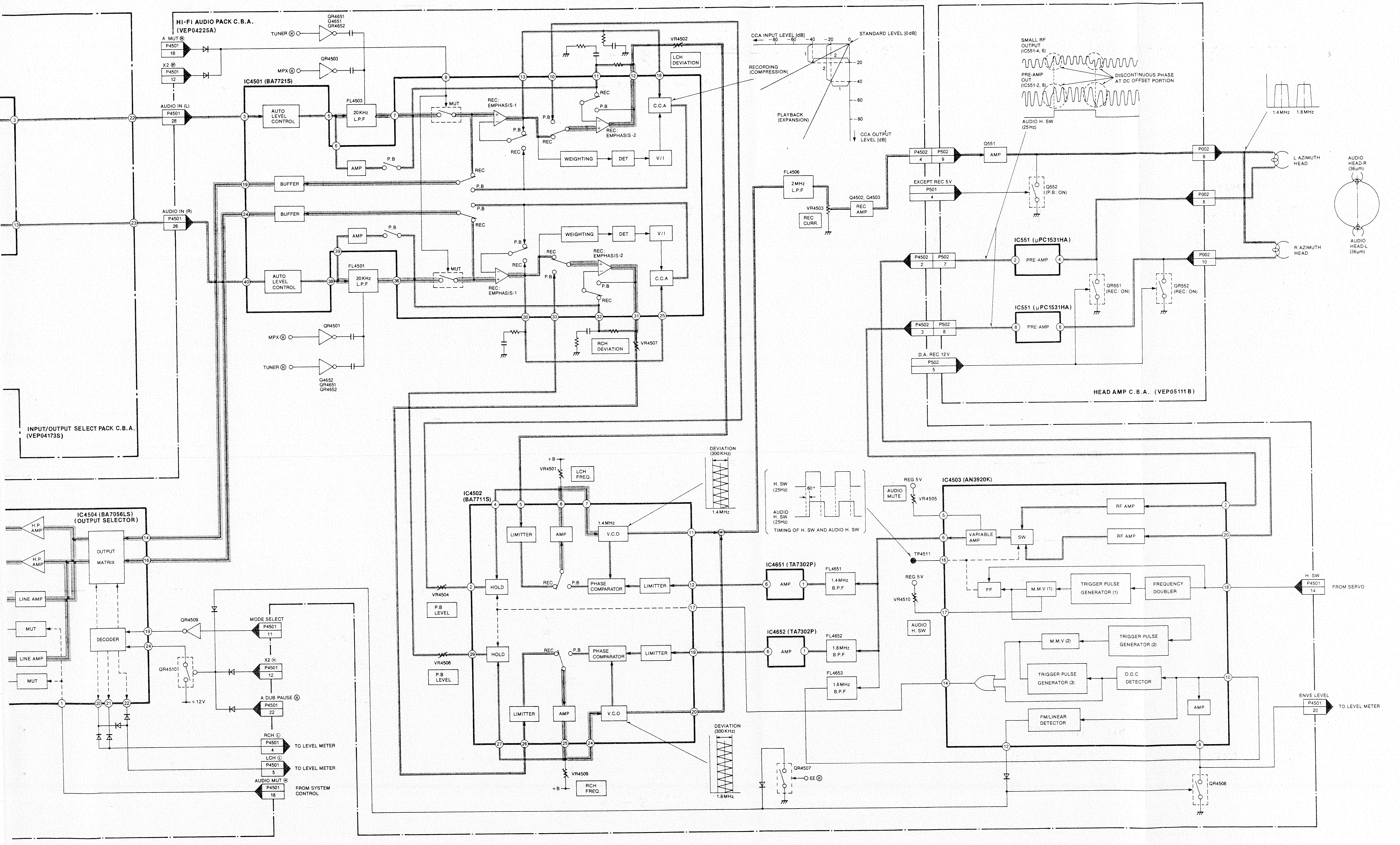
3-5. Hi-Fi AUDIO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

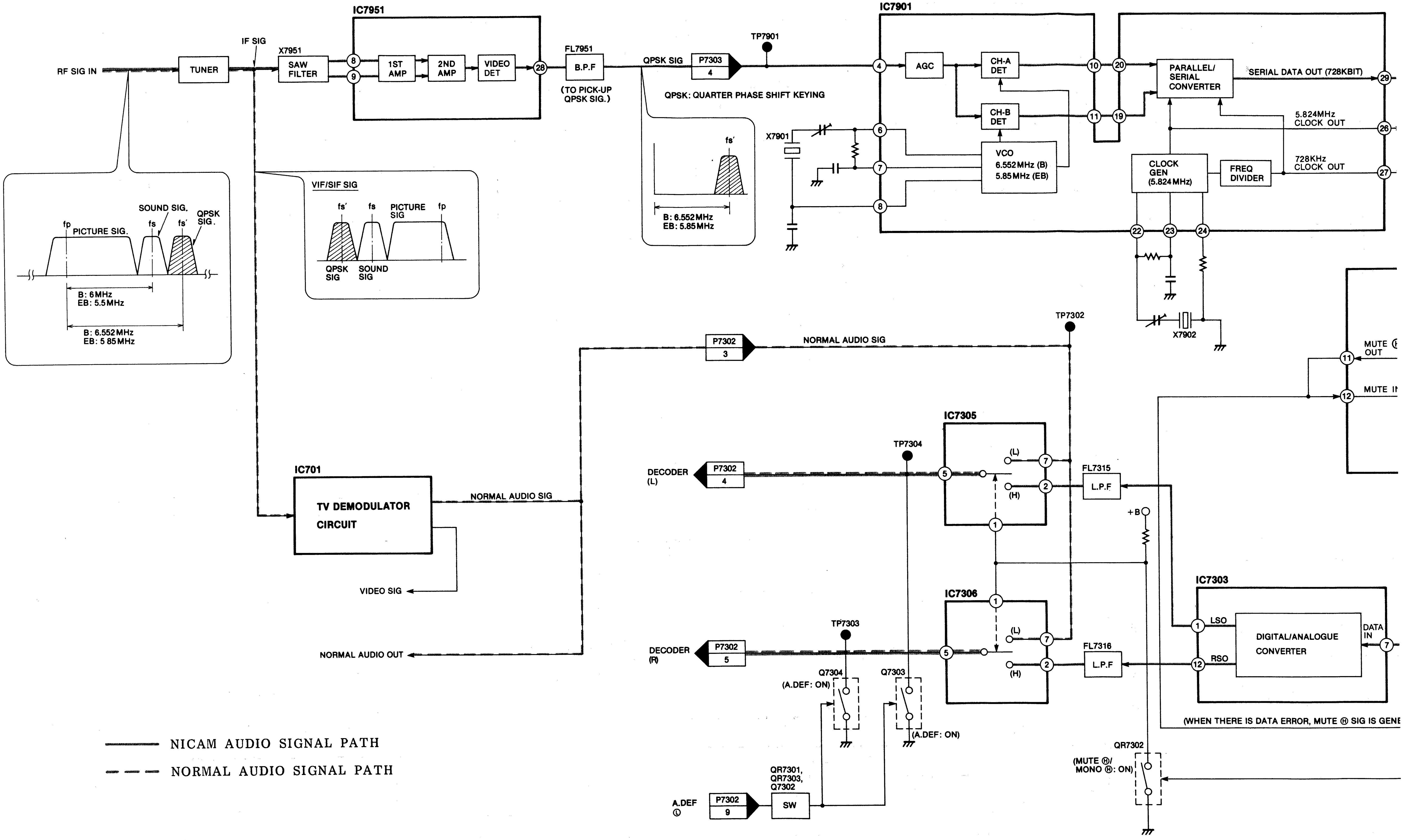

AV Ⓗ
J4952
MIC Ⓗ
P4902
TUNER Ⓗ
MIC
21 PIN JACK
J4951
AV CH1 (IN)
AV CH2 (IN)
ANT
DEMODU
TUNER CH1 (IN)
TUNER CH2 (IN)
AUDIO IN
LINE CH1 (IN)
LINE CH2 (IN)
IC4951 (UPD4052)
INPUT SELECT DECODER
IC4952 (AN6558)
VR IN CH1
VR IN CH2
J4901
IC4901(M51132L)
VCA
VOLTAGE CONTROL
VR7501
AUDIO REC VR
SUB INPUT/OUTPUT SELECT PACK C.B.A. (VEP04174H)
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)
Hi-Fi AUDIO PACK C.B.A. (VEP04225A)
A MUT Ⓗ
P4501
X2 Ⓗ
AUDIO IN (L)
AUDIO IN (R)
TUNER Ⓗ
MPX Ⓗ
QR4651
Q4651
QR4652
QR4503
QR4501
Q4652
IC4501 (BA7721S)
AUTO LEVEL CONTROL
FL4503
20KHz L.P.F
FL4501
AMP
BUFFER
MUT
REC
P.B
REC: EMPHASIS-1
REC: EMPHASIS-2
WEIGHTING
DET
V/I
C.C.A
VR4502
LCH DEVIATION
RCH DEVIATION
VR4507
CCA INPUT LEVEL [dB]
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
FL4506
2MHz L.P.F
VR4503
REC CURR.
IC4502 (BA7711S)
VR4501
LCH FREQ.
LIMITTER
V.C.O
1.4MHz
PHASE COMPARATOR
HOLD
VR4504
P.B LEVEL
VR4506
VR4509
RCH FREQ.
DEVIATION (300KHz)
1.8MHz
H. SW (25Hz)
AUDIO H. SW (25Hz)
TIMING OF H. SW AND A
IC4651 (TA7302P)
IC4652 (TA7302P)
QR4507
EE Ⓗ
HP OUT (L)
HP OUT (R)
PJ6301
P4903
HEADPHONE JACK
IC4504 (BA7056LS) (OUTPUT SELECTOR)
H.P. AMP
OUTPUT MATRIX
LINE AMP
DECODER
AUDIO OUT (L)
AUDIO OUT (R)
Q4505
Q4504
QR4509
QR4510
MODE SELECT
A DUB PAUSE Ⓗ
RCH Ⓛ
LCH Ⓛ
AUDIO MUT Ⓗ
TO LEVEL METER
FROM SYSTEM CONTROL
+12V
RF CONV. OUT
Q4701
Q4702
SUB (1) Hi-Fi AUDIO PACK C.B.A. (VEP00H59B)

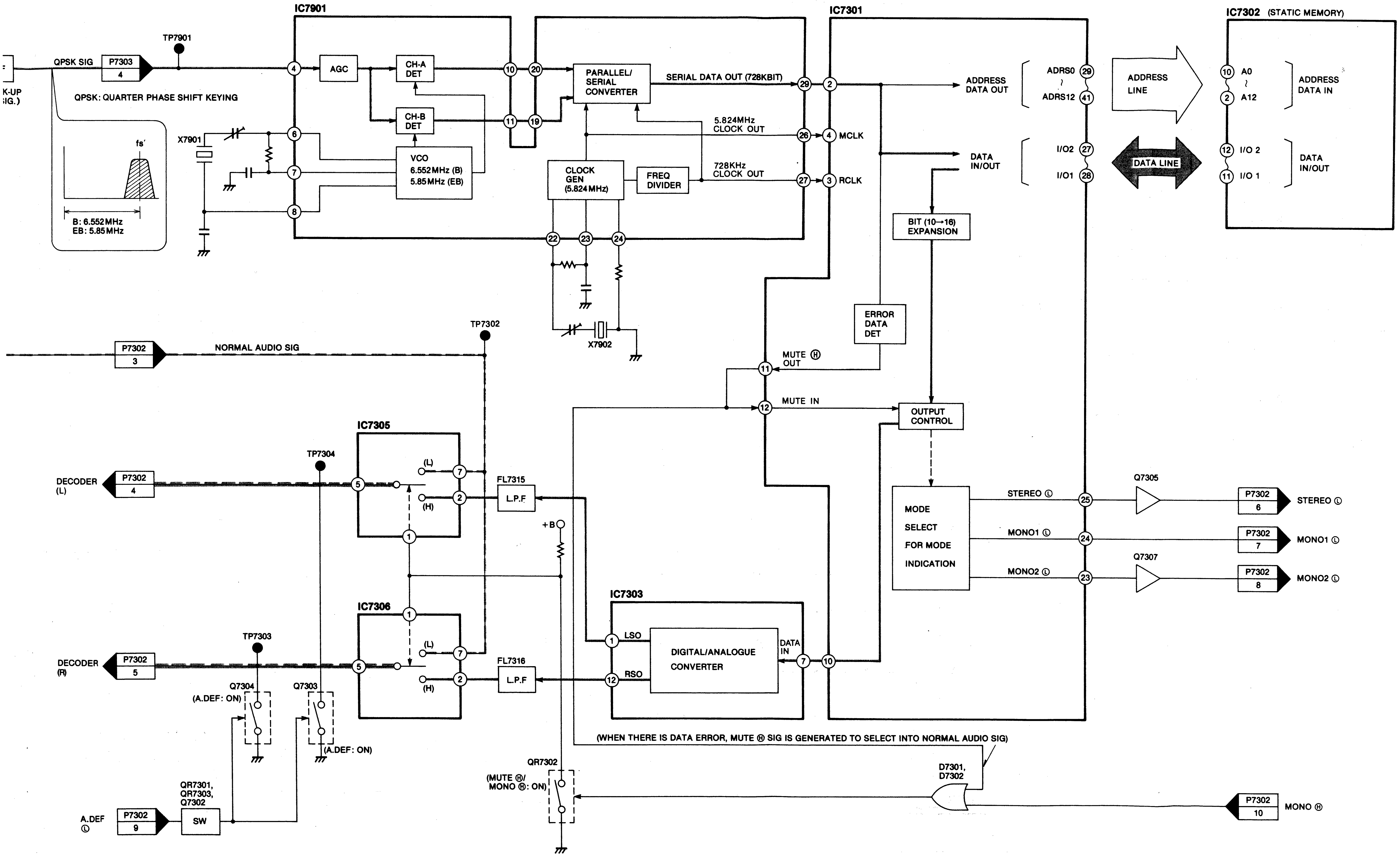
N REC MODE —— MAIN SIGNAL PATH IN PLAYBACK MODE


HI-FI AUDIO PACK C.B.A. (VEP04225A)
A. MUT Ⓗ
P4501 18
X2 Ⓗ
P4501 12
AUDIO IN (L)
P4501 28
AUDIO IN (R)
P4501 26
TUNER Ⓗ
MPX Ⓗ
QR4651 Q4651 QR4652
QR4503
QR4501
Q4652 QR4651 QR4652
IC4501 (BA7721S)
AUTO LEVEL CONTROL
FL4503
FL4501
20KHz L.P.F
AMP
BUFFER
MUT
REC: EMPHASIS-1
REC: EMPHASIS-2
WEIGHTING
DET
V/I
C.C.A
LCH DEVIATION
RCH DEVIATION
VR4502
VR4507
P.B
REC
CCA INPUT LEVEL [dB]
-80 -60 -40 -20 0
STANDARD LEVEL [0dB]
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA OUTPUT LEVEL [dB]
-20 -40 -60 -80
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)
IC4504 (BA7056LS) (OUTPUT SELECTOR)
OUTPUT MATRIX
DECODER
H.P. AMP
LINE AMP
MUT
QR4509
QR4510
MODE SELECT P4501 11
X2 Ⓗ P4501 12
A. DUB PAUSE Ⓗ P4501 22
+12V
RCH Ⓛ P4501 4 TO LEVEL METER
LCH Ⓛ P4501 5 TO LEVEL METER
AUDIO MUT Ⓗ P4501 18 FROM SYSTEM CONTROL
IC4502 (BA7711S)
+B
VR4501
LCH FREQ.
RCH FREQ.
VR4509
LIMITTER
AMP
1.4MHz
V.C.O
HOLD
PHASE COMPARATOR
LIMITTER
VR4504
VR4506
P.B LEVEL
DEVIATION (300KHz)
1.4MHz
1.8MHz
H. SW (25Hz)
60°
AUDIO H. SW (25Hz)
TIMING OF H. SW AND AUDIO H. SW
FL4506
2MHz L.P.F
VR4503
REC CURR.
Q4502, Q4503
REC AMP
IC4651 (TA7302P)
IC4652 (TA7302P)
FL4651 1.4MHz B.P.F
FL4652 1.8MHz B.P.F
FL4653 1.6MHz B.P.F
QR4507
EE Ⓗ
P4502 P502 4 9
EXCEPT REC 5V P501 4
P4502 P502 2 7
P4502 P502 3 8
D.A. REC 12V P502 5
Q551
AMP
Q552 (P.B: ON)
IC551 (μPC1531HA)
PRE-AMP
QR551 (REC: ON)
QR552 (REC: ON)
HEAD AMP C.B.A. (VEP05111B)
SMALL RF OUTPUT (IC551-4, 6)
PRE-AMP OUT (IC551-2, 8)
DISCONTINUOUS PHASE AT DC OFFSET PORTION
AUDIO H. SW (25Hz)
1.4MHz 1.8MHz
P002 9
P002 8
P002 10
L AZIMUTH HEAD
R AZIMUTH HEAD
AUDIO HEAD-R (36μm)
AUDIO HEAD-L (36μm)
REG 5V
AUDIO MUTE
VR4505
TP4511
VR4510
AUDIO H. SW
IC4503 (AN3920K)
VARIABLE AMP
SW
RF AMP
FF
M.M.V (1)
M.M.V (2)
TRIGGER PULSE GENERATOR (1)
TRIGGER PULSE GENERATOR (2)
TRIGGER PULSE GENERATOR (3)
FREQUENCY DOUBLER
D.O.C DETECTOR
FM/LINEAR DETECTOR
QR4508
H. SW P4501 14 FROM SERVO
ENVE LEVEL P4501 20 TO LEVEL METER

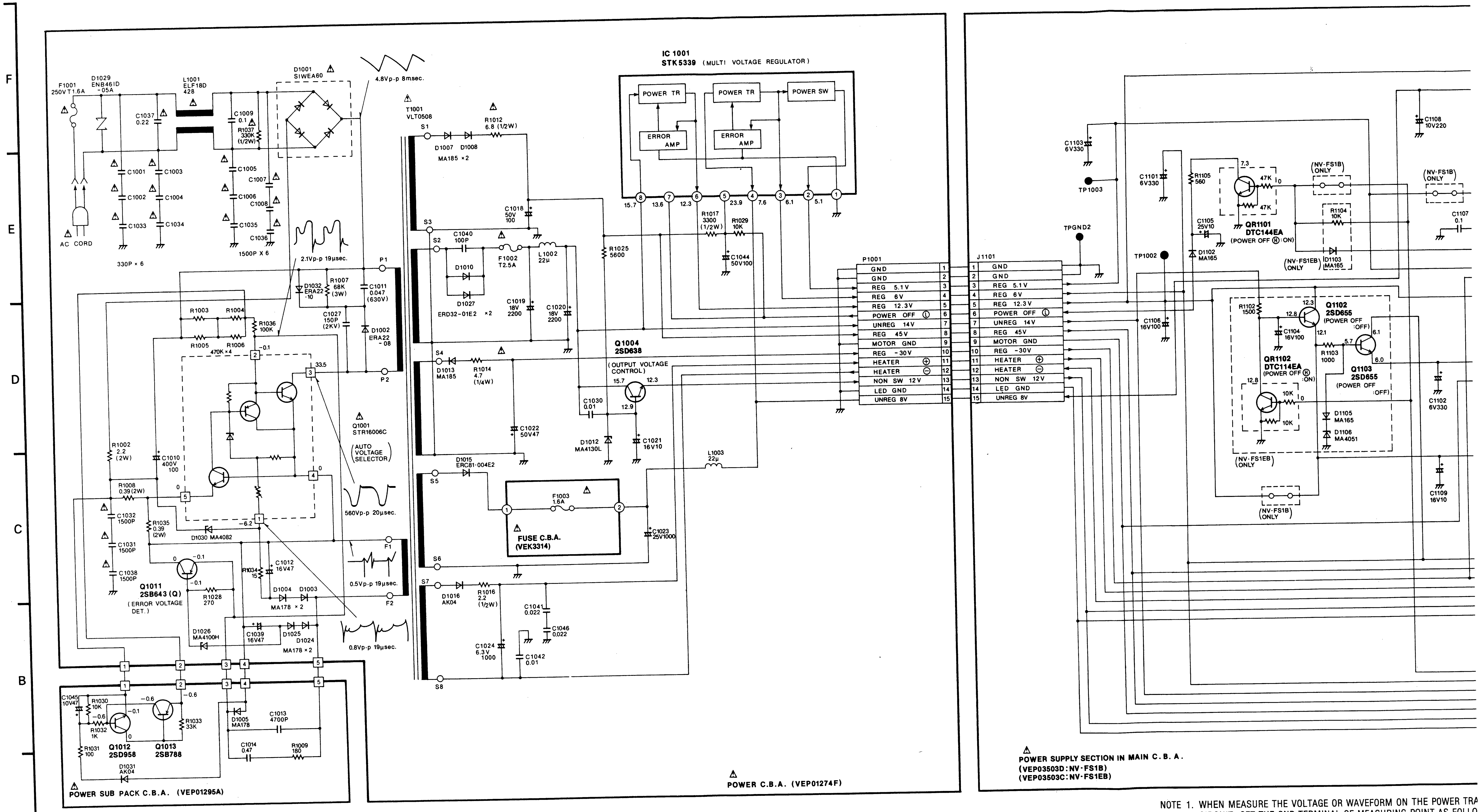
Next Page:
NICAM DECODER Section

3-6. NICAM DECODER BLOCK DIAGRAM


RF SIG IN
TUNER
IF SIG
X7951
SAW FILTER
IC7951
1ST AMP
2ND AMP
VIDEO DET
8
9
28
FL7951
B.P.F
(TO PICK-UP QPSK SIG.)
QPSK SIG
P7303
4
TP7901
QPSK: QUARTER PHASE SHIFT KEYING
fs'
B: 6.552MHz
EB: 5.85MHz
X7901
IC7901
4
6
7
8
AGC
CH-A DET
CH-B DET
VCO
6.552MHz (B)
5.85MHz (EB)
10
11
20
19
PARALLEL/ SERIAL CONVERTER
SERIAL DATA OUT (728KBIT)
29
5.824MHz CLOCK OUT
26
CLOCK GEN (5.824MHz)
FREQ DIVIDER
728KHz CLOCK OUT
27
22
23
24
X7902
SOUND SIG.
QPSK SIG.
fp
PICTURE SIG.
fs
fs'
B: 6MHz
EB: 5.5MHz
B: 6.552MHz
EB: 5 85MHz
VIF/SIF SIG
fs'
fs
PICTURE SIG
fp
QPSK SIG
SOUND SIG
TP7302
P7302
3
NORMAL AUDIO SIG
MUTE OUT
11
MUTE I
12
IC701
TV DEMODULATOR CIRCUIT
NORMAL AUDIO SIG
VIDEO SIG
NORMAL AUDIO OUT
IC7305
TP7304
DECODER (L)
P7302
4
5
(L)
(H)
7
2
1
FL7315
L.P.F
+B
IC7306
1
DECODER (R)
P7302
5
5
(L)
(H)
7
2
FL7316
L.P.F
TP7303
Q7304
(A.DEF: ON)
Q7303
(A.DEF: ON)
IC7303
LSO
RSO
1
12
DIGITAL/ANALOGUE CONVERTER
DATA IN
7
(WHEN THERE IS DATA ERROR, MUTE ® SIG IS GENE
QR7302
(MUTE ®/ MONO ®: ON)
A.DEF
Ⓛ
P7302
9
QR7301, QR7303, Q7302
SW
———— NICAM AUDIO SIGNAL PATH
– – – – NORMAL AUDIO SIGNAL PATH


IC7901
TP7901
QPSK SIG
P7303
4
K-UP
IG.)
QPSK: QUARTER PHASE SHIFT KEYING
fs′
B: 6.552MHz
EB: 5.85MHz
X7901
AGC
CH-A
DET
CH-B
DET
VCO
6.552MHz (B)
5.85MHz (EB)
PARALLEL/
SERIAL
CONVERTER
SERIAL DATA OUT (728KBIT)
5.824MHz
CLOCK OUT
728KHz
CLOCK OUT
CLOCK
GEN
(5.824MHz)
FREQ
DIVIDER
X7902
IC7301
MCLK
RCLK
ADDRESS
DATA OUT
DATA
IN/OUT
ADRS0
ADRS12
I/O2
I/O1
ADDRESS
LINE
DATA LINE
IC7302 (STATIC MEMORY)
A0
A12
I/O 2
I/O 1
ADDRESS
DATA IN
DATA
IN/OUT
BIT (10→16)
EXPANSION
ERROR
DATA
DET
MUTE Ⓗ
OUT
MUTE IN
OUTPUT
CONTROL
MODE
SELECT
FOR MODE
INDICATION
STEREO Ⓛ
MONO1 Ⓛ
MONO2 Ⓛ
Q7305
Q7307
P7302
6
7
8
STEREO Ⓛ
MONO1 Ⓛ
MONO2 Ⓛ
TP7302
P7302
3
NORMAL AUDIO SIG
IC7305
TP7304
DECODER
(L)
P7302
4
(L)
(H)
FL7315
L.P.F
+B
IC7306
TP7303
DECODER
(R)
P7302
5
(L)
(H)
FL7316
L.P.F
IC7303
LSO
RSO
DIGITAL/ANALOGUE
CONVERTER
DATA
IN
Q7304
(A.DEF: ON)
Q7303
(A.DEF: ON)
QR7301,
QR7303,
Q7302
SW
A.DEF
Ⓛ
P7302
9
QR7302
(MUTE Ⓗ/
MONO Ⓗ: ON)
(WHEN THERE IS DATA ERROR, MUTE Ⓗ SIG IS GENERATED TO SELECT INTO NORMAL AUDIO SIG)
D7301,
D7302
P7302
10
MONO Ⓗ

3-7. POWER SCHEMATIC DIAGRAM


F
E
D
C
B
A
F1001 250V T1.6A
D1029 ENB461D -05A
L1001 ELF18D 428
C1037 0.22
C1001
C1003
C1002
C1004
C1033
C1034
330P × 6
AC CORD
C1009 0.1
R1037 330K (1/2W)
C1005
C1007
C1006
C1008
C1035
C1036
1500P X 6
D1001 S1WEA60
4.8Vp-p 8msec.
2.1Vp-p 19μsec.
T1001 VLT0508
S1
D1007 D1008
MA185 ×2
R1012 6.8 (1/2W)
C1018 50V 100
S3
S2
C1040 100P
F1002 T2.5A
L1002 22μ
D1010
D1027
ERD32-01E2 ×2
C1019 18V 2200
C1020 18V 2200
S4
D1013 MA185
R1014 4.7 (1/4W)
C1022 50V47
D1015 ERC81-004E2
S5
F1003 1.6A
FUSE C.B.A. (VEK3314)
C1023 25V1000
S6
S7
D1016 AK04
R1016 2.2 (1/2W)
C1041 0.022
C1046 0.022
C1024 6.3V 1000
C1042 0.01
S8
P1
P2
F1
F2
D1032 ERA22 -10
R1007 68K (3W)
C1011 0.047 (630V)
C1027 150P (2KV)
D1002 ERA22 -08
R1003
R1004
R1036 100K
R1005
R1006
470K ×4
Q1001 STR16006C
(AUTO VOLTAGE SELECTOR)
560Vp-p 20μsec.
0.5Vp-p 19μsec.
0.8Vp-p 19μsec.
R1002 2.2 (2W)
C1010 400V 100
R1008 0.39 (2W)
C1032 1500P
R1035 0.39 (2W)
D1030 MA4082
C1031 1500P
C1038 1500P
Q1011 2SB643 (Q)
(ERROR VOLTAGE DET.)
R1028 270
R1034 15
C1012 16V47
D1004 D1003
MA178 × 2
D1026 MA4100H
C1039 16V47
D1025
D1024
MA178 × 2
C1045 10V47
R1030 10K
R1032 1K
R1031 100
Q1012 2SD958
Q1013 2SB788
R1033 33K
D1031 AK04
D1005 MA178
C1013 4700P
C1014 0.47
R1009 180
POWER SUB PACK C.B.A. (VEP01295A)
IC 1001
STK5339 (MULTI VOLTAGE REGULATOR)
POWER TR
POWER TR
POWER SW
ERROR AMP
ERROR AMP
15.7
13.6
12.3
23.9
7.6
6.1
5.1
R1017 3300 (1/2W)
R1029 10K
C1044 50V100
R1025 5600
Q1004 2SD638
(OUTPUT VOLTAGE CONTROL)
C1030 0.01
D1012 MA4130L
C1021 16V10
L1003 22μ
POWER C.B.A. (VEP01274F)
P1001
1 GND
2 GND
3 REG 5.1V
4 REG 6V
5 REG 12.3V
6 POWER OFF Ⓛ
7 UNREG 14V
8 REG 45V
9 MOTOR GND
10 REG -30V
11 HEATER ⊕
12 HEATER ⊖
13 NON SW 12V
14 LED GND
15 UNREG 8V
J1101
C1103 6V330
TP1003
TPGND2
TP1002
C1101 6V330
R1105 560
QR1101 DTC144EA (POWER OFF Ⓗ:ON)
47K
C1105 25V10
D1102 MA165
(NV-FS1B) ONLY
R1104 10K
(NV-FS1EB) ONLY
D1103 MA165
C1108 10V220
C1107 0.1
C1106 16V100
R1102 1500
Q1102 2SD655 (POWER OFF :OFF)
C1104 16V100
QR1102 DTC114EA (POWER OFF Ⓗ :ON)
R1103 1000
Q1103 2SD655 (POWER OFF :OFF)
D1105 MA165
D1106 MA4051
C1102 6V330
C1109 16V10
(NV-FS1EB) ONLY
(NV-FS1B) ONLY
POWER SUPPLY SECTION IN MAIN C.B.A.
(VEP03503D: NV-FS1B)
(VEP03503C: NV-FS1EB)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

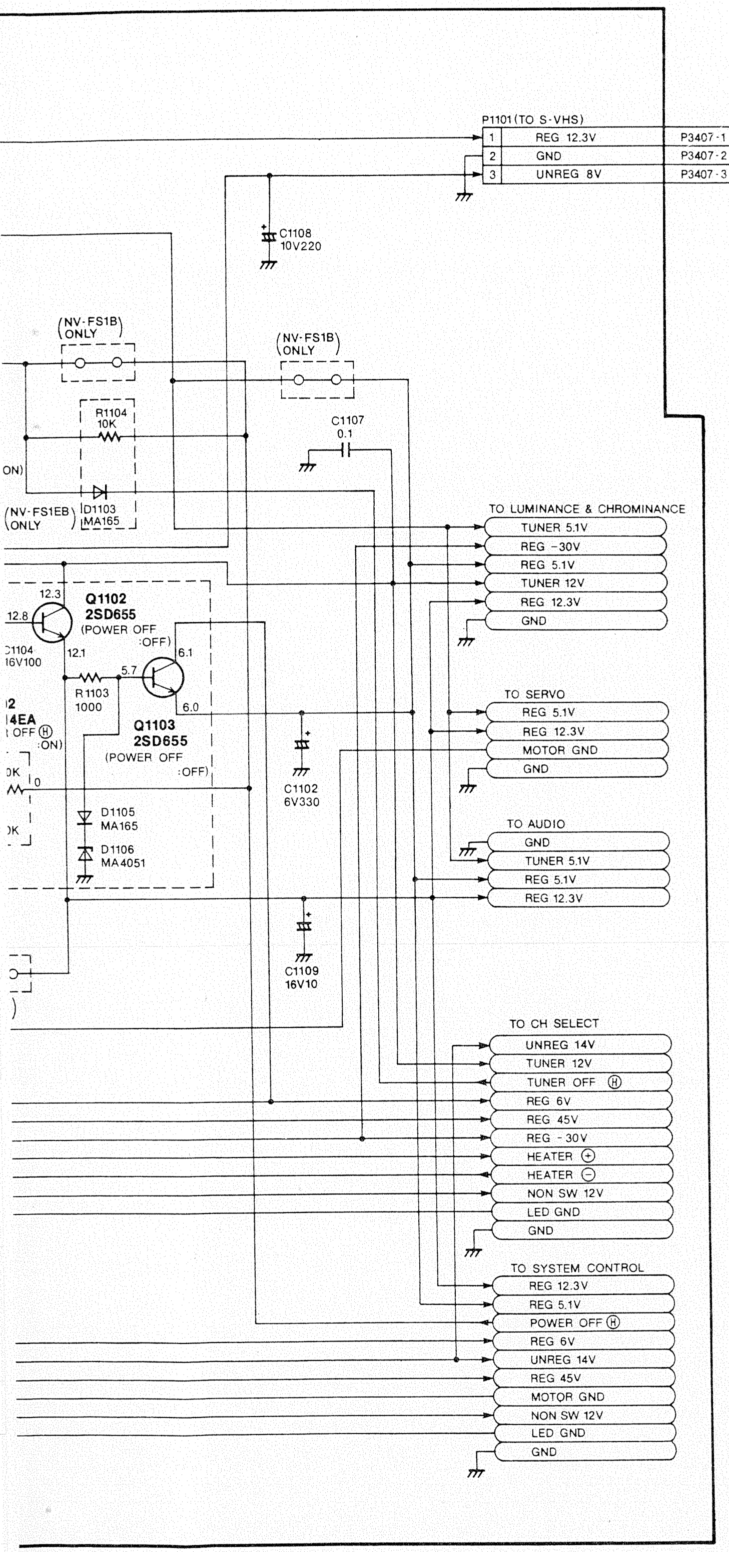
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRA
CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLO
PRIMARY SIDE ...... Q1001-(5)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOL
INPUT AC IS 240V.

1 2 3 4 5 6 7 8 9 10

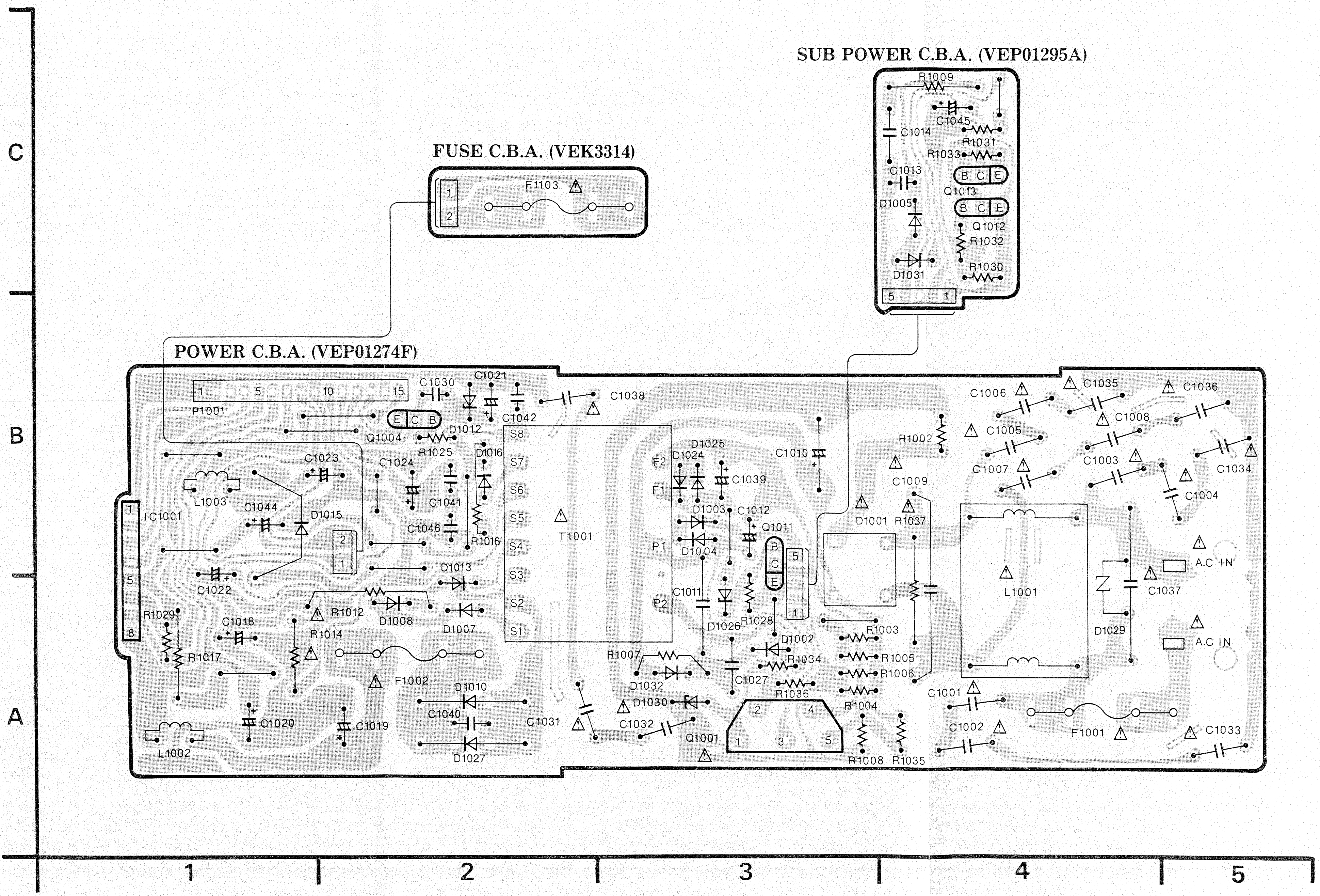
3-8. POWER C.B.A. (VEP01274F)

POWER C.B.A.	
Transistor	
Q1001	A-3
Q1004	B-2
Q1011	B-3
Q1012	C-4
Q1013	C-4
Integrated Circuit	
IC1001	B-1
Connector	
P1001	B-1

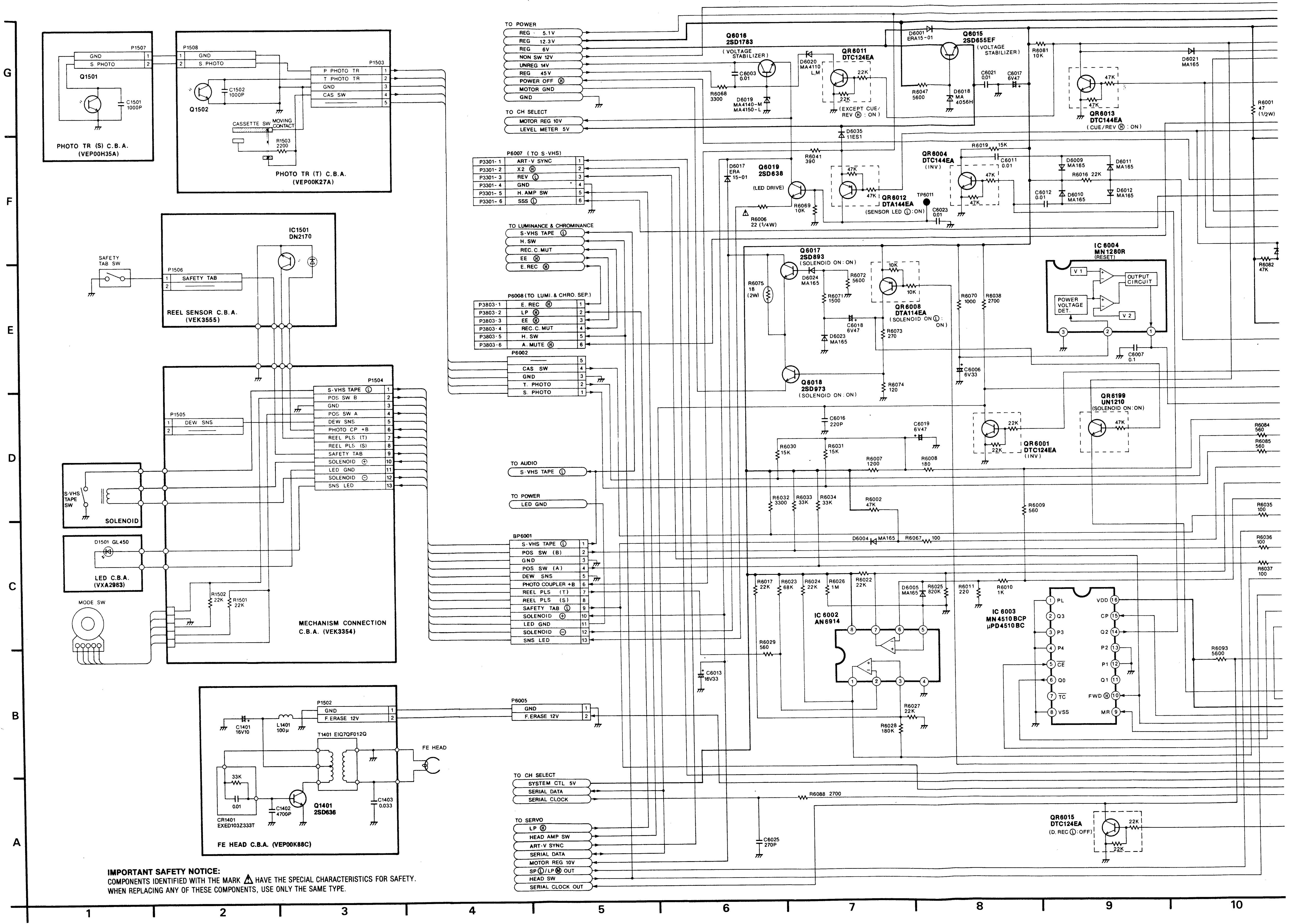
ADDRESS INFORMATION


P1101 (TO S-VHS)
REG 12.3V
GND
UNREG 8V
P3407-1
P3407-2
P3407-3
C1108 10V220
(NV-FS1B ONLY)
R1104 10K
D1103 MA165
(NV-FS1EB ONLY)
C1107 0.1
Q1102 2SD655 (POWER OFF :OFF)
Q1103 2SD655 (POWER OFF :OFF)
R1103 1000
C1104 16V100
C1102 6V330
C1109 16V10
D1105 MA165
D1106 MA4051
TO LUMINANCE & CHROMINANCE
TUNER 5.1V
REG -30V
REG 5.1V
TUNER 12V
REG 12.3V
GND
TO SERVO
REG 5.1V
REG 12.3V
MOTOR GND
GND
TO AUDIO
GND
TUNER 5.1V
REG 5.1V
REG 12.3V
TO CH SELECT
UNREG 14V
TUNER 12V
TUNER OFF Ⓗ
REG 6V
REG 45V
REG -30V
HEATER ⊕
HEATER ⊖
NON SW 12V
LED GND
GND
TO SYSTEM CONTROL
REG 12.3V
REG 5.1V
POWER OFF Ⓗ
REG 6V
UNREG 14V
REG 45V
MOTOR GND
NON SW 12V
LED GND
GND
9
10
11

'OLTAGE OR WAVEFORM ON THE POWER TRANSFORMER
TERMINAL OF MEASURING POINT AS FOLLOWS.
. Q1001-(5)
. TP GND OF MAIN C.B.A.
:ATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN


SUB POWER C.B.A. (VEP01295A)
FUSE C.B.A. (VEK3314)
POWER C.B.A. (VEP01274F)
F1103
R1009
C1014
C1045
R1031
R1033
C1013
Q1013
Q1012
D1005
R1032
D1031
R1030
P1001
IC1001
Q1004
L1003
L1002
T1001
Q1001
Q1011
L1001
F1001
F1002
A.C IN
A.C IN
C
B
A
1
2
3
4
5

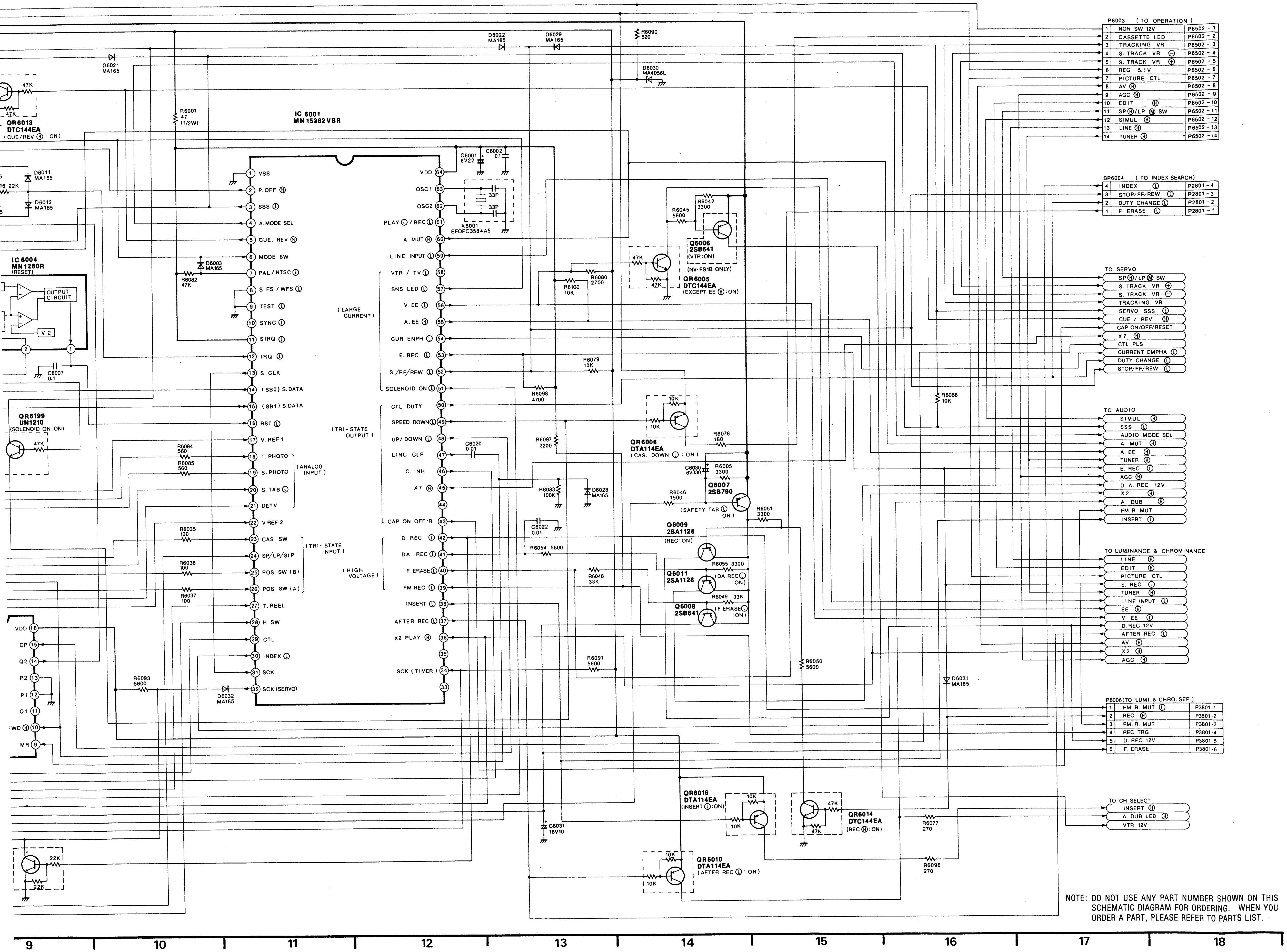
3-9. SYSTEM CONTROL SCHEMATIC DIAGRAM



G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
P1507
GND
S. PHOTO
Q1501
C1501 1000P
PHOTO TR (S) C.B.A. (VEP00H35A)
P1508
P1503
P PHOTO TR
T PHOTO TR
CAS SW
Q1502
C1502 1000P
CASSETTE SW
MOVING CONTACT
R1503 2200
PHOTO TR (T) C.B.A. (VEP00K27A)
IC1501 DN2170
SAFETY TAB SW
P1506
SAFETY TAB
REEL SENSOR C.B.A. (VEK3555)
P1504
S-VHS TAPE Ⓛ
POS SW B
POS SW A
DEW SNS
PHOTO CP +B
REEL PLS (T)
REEL PLS (S)
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
P1505
DEW SNS
S-VHS TAPE SW
SOLENOID
D1501 GL450
LED C.B.A. (VXA2983)
MODE SW
R1502 22K
R1501 22K
MECHANISM CONNECTION C.B.A. (VEK3354)
P1502
F.ERASE 12V
C1401 16V10
L1401 100μ
T1401 EIQ7QF012Q
FE HEAD
33K
0.01
C1402 4700P
Q1401 2SD636
C1403 0.033
CR1401 EXED103Z333T
FE HEAD C.B.A. (VEP00K88C)
TO POWER
REG 5.1V
REG 12.3V
REG 6V
NON SW 12V
UNREG 14V
REG 45V
POWER OFF Ⓗ
MOTOR GND
GND
TO CH SELECT
MOTOR REG 10V
LEVEL METER 5V
P6007 (TO S-VHS)
P3301-1 ART-V SYNC
P3301-2 X2 Ⓗ
P3301-3 REV Ⓛ
P3301-4 GND
P3301-5 H. AMP SW
P3301-6 SSS Ⓛ
TO LUMINANCE & CHROMINANCE
S-VHS TAPE Ⓛ
H. SW
REC.C.MUT
EE Ⓗ
E.REC Ⓗ
P6008 (TO LUMI. & CHRO. SEP.)
P3803-1 E. REC Ⓗ
P3803-2 LP Ⓗ
P3803-3 EE Ⓗ
P3803-4 REC.C.MUT
P3803-5 H. SW
P3803-6 A. MUTE Ⓗ
P6002
CAS SW
T. PHOTO
S. PHOTO
TO AUDIO
S-VHS TAPE Ⓛ
TO POWER
LED GND
BP6001
S-VHS TAPE Ⓛ
POS SW (B)
POS SW (A)
DEW SNS
PHOTO COUPLER +B
REEL PLS (T)
REEL PLS (S)
SAFETY TAB Ⓛ
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
P6005
F.ERASE 12V
TO CH SELECT
SYSTEM CTL 5V
SERIAL DATA
SERIAL CLOCK
TO SERVO
LP Ⓗ
HEAD AMP SW
ART-V SYNC
SERIAL DATA
MOTOR REG 10V
SP Ⓛ/LP Ⓜ OUT
HEAD SW
SERIAL CLOCK OUT
Q6016 2SD1783 (VOLTAGE STABILIZER)
C6003 0.01
R6068 3300
D6019 MA4140-M MA4150-L
D6020 MA4110 L,M
QR6011 DTC124EA
22K
(EXCEPT CUE/REV Ⓗ : ON)
D6001 ERA15-01
Q6015 2SD655EF (VOLTAGE STABILIZER)
R6047 5600
D6018 MA4056H
C6021 0.01
C6017 6V47
R6081 10K
D6021 MA165
QR6013 DTC144EA (CUE/REV Ⓗ : ON)
47K
R6001 47 (1/2W)
D6035 11ES1
R6041 390
D6017 ERA 15-01
Q6019 2SD638 (LED DRIVE)
R6069 10K
R6006 22 (1/4W)
QR6012 DTA144EA (SENSOR LED Ⓛ : ON)
TP6011
C6023 0.01
QR6004 DTC144EA (INV)
R6019 15K
C6011 0.01
C6012 0.01
D6009 MA165
D6010 MA165
R6016 22K
D6011 MA165
D6012 MA165
Q6017 2SD893 (SOLENOID ON : ON)
R6075 18 (2W)
D6024 MA165
R6072 5600
R6071 1500
C6018 6V47
D6023 MA165
QR6008 DTA114EA (SOLENOID ON Ⓛ : ON)
10K
R6073 270
R6070 1000
R6038 2700
IC6004 MN1280R (RESET)
V1
V2
OUTPUT CIRCUIT
POWER VOLTAGE DET.
C6007 0.1
R6082 47K
C6006 6V33
Q6018 2SD973 (SOLENOID ON : ON)
R6074 120
QR6199 UN1210 (SOLENOID ON : ON)
C6016 220P
C6019 6V47
QR6001 DTC124EA (INV)
R6030 15K
R6031 15K
R6007 1200
R6008 180
R6084 560
R6085 560
R6032 3300
R6033 33K
R6034 33K
R6002 47K
R6009 560
R6035 100
D6004 MA165
R6067 100
R6036 100
R6037 100
R6017 22K
R6023 68K
R6024 22K
R6026 1M
R6022 22K
D6005 MA165
R6025 820K
R6011 220
R6010 1K
IC6002 AN6914
IC6003 MN4510BCP μPD4510BC
PL
Q3
P3
P4
CE
Q0
TC
VSS
VDD
CP
Q2
P2
P1
Q1
FWD Ⓗ
MR
R6029 560
C6013 16V33
R6027 22K
R6028 180K
R6093 5600
R6088 2700
C6025 270P
QR6015 DTC124EA (D. REC Ⓛ : OFF)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
POWER Section


P6003 (TO OPERATION)
1 NON SW 12V P6502-1
2 CASSETTE LED P6502-2
3 TRACKING VR P6502-3
4 S. TRACK VR ⊖ P6502-4
5 S. TRACK VR ⊕ P6502-5
6 REG 5.1V P6502-6
7 PICTURE CTL P6502-7
8 AV Ⓗ P6502-8
9 AGC Ⓗ P6502-9
10 EDIT Ⓗ P6502-10
11 SPⒽ/LP Ⓜ SW P6502-11
12 SIMUL Ⓗ P6502-12
13 LINE Ⓗ P6502-13
14 TUNER Ⓗ P6502-14
BP6004 (TO INDEX SEARCH)
4 INDEX Ⓛ P2801-4
3 STOP/FF/REW Ⓛ P2801-3
2 DUTY CHANGE Ⓛ P2801-2
1 F. ERASE Ⓛ P2801-1
TO SERVO
SPⒽ/LPⓂ SW
S. TRACK VR ⊕
S. TRACK VR ⊖
TRACKING VR
SERVO SSS Ⓛ
CUE / REV Ⓗ
CAP ON/OFF/RESET
X7 Ⓗ
CTL PLS
CURRENT EMPHA Ⓛ
DUTY CHANGE Ⓛ
STOP/FF/REW Ⓛ
TO AUDIO
SIMUL Ⓗ
SSS Ⓛ
AUDIO MODE SEL
A. MUT Ⓗ
A. EE Ⓗ
TUNER Ⓗ
E. REC Ⓛ
AGC Ⓗ
D. A. REC 12V
X2 Ⓗ
A. DUB Ⓗ
FM.R. MUT
INSERT Ⓛ
TO LUMINANCE & CHROMINANCE
LINE Ⓗ
EDIT Ⓗ
PICTURE CTL
E. REC Ⓛ
TUNER Ⓗ
LINE INPUT Ⓛ
EE Ⓗ
V. EE Ⓛ
D.REC 12V
AFTER REC Ⓛ
AV Ⓗ
X2 Ⓗ
AGC Ⓗ
P6006 (TO LUMI. & CHRO. SEP.)
1 FM.R. MUT Ⓛ P3801-1
2 REC Ⓗ P3801-2
3 FM.R. MUT P3801-3
4 REC TRG P3801-4
5 D. REC 12V P3801-5
6 F. ERASE P3801-6
TO CH SELECT
INSERT Ⓗ
A. DUB LED Ⓗ
VTR 12V
IC 6001
MN15362VBR
1 VSS
2 P. OFF Ⓗ
3 SSS Ⓛ
4 A. MODE SEL
5 CUE. REV Ⓗ
6 MODE SW
7 PAL / NTSC Ⓛ
8 S.FS / WFS Ⓛ
9 TEST Ⓛ
10 SYNC Ⓛ
11 SIRQ Ⓛ
12 IRQ Ⓛ
13 S. CLK
14 (SB0) S.DATA
15 (SB1) S.DATA
16 RST Ⓛ
17 V. REF 1
18 T. PHOTO
19 S. PHOTO
20 S. TAB Ⓛ
21 DETV
22 V REF 2
23 CAS SW
24 SP/LP/SLP
25 POS SW (B)
26 POS SW (A)
27 T. REEL
28 H. SW
29 CTL
30 INDEX Ⓛ
31 SCK
32 SCK (SERVO)
(ANALOG INPUT)
(TRI-STATE INPUT)
64 VDD
63 OSC1
62 OSC2
61 PLAY Ⓛ / REC Ⓛ
60 A. MUT Ⓗ
59 LINE INPUT Ⓛ
58 VTR / TV Ⓛ
57 SNS LED Ⓛ
56 V. EE Ⓛ
55 A. EE Ⓗ
54 CUR ENPH Ⓛ
53 E. REC Ⓛ
52 S./FF/REW Ⓛ
51 SOLENOID ON Ⓛ
50 CTL DUTY
49 SPEED DOWN Ⓛ
48 UP/DOWN Ⓛ
47 LINC CLR
46 C. INH
45 X7 Ⓗ
44
43 CAP ON OFF·R
42 D. REC Ⓛ
41 DA. REC Ⓛ
40 F. ERASE Ⓛ
39 FM REC Ⓛ
38 INSERT Ⓛ
37 AFTER REC Ⓛ
36 X2 PLAY Ⓗ
35
34 SCK (TIMER)
33
(LARGE CURRENT)
(TRI-STATE OUTPUT)
(HIGH VOLTAGE)
C6001 6V22
C6002 0.1
33P
33P
X6001 EFOFC3584A5
IC 6004
MN1280R
(RESET)
OUTPUT CIRCUIT
V 2
C6007 0.1
QR6013
DTC144EA
(CUE/REV Ⓗ : ON)
47K
47K
D6021 MA165
D6011 MA165
D6012 MA165
R6001 47 (1/2W)
D6003 MA165
R6082 47K
QR6199
UN1210
(SOLENOID ON:ON)
47K
R6084 560
R6085 560
R6035 100
R6036 100
R6037 100
R6093 5600
D6032 MA165
VDD 16
CP 15
Q2 14
P2 13
P1 12
Q1 11
FWD Ⓗ 10
MR 9
22K
22K
D6022 MA165
D6029 MA165
R6090 820
D6030 MA4056L
R6045 5600
R6042 3300
Q6006 2SB641 (VTR:ON)
(NV-FS1B ONLY)
QR6005 DTC144EA (EXCEPT EE Ⓗ : ON)
47K
47K
R6100 10K
R6080 2700
R6079 10K
R6098 4700
QR6006 DTA114EA (CAS. DOWN Ⓛ : ON)
10K
10K
R6076 180
R6097 2200
C6020 0.01
R6083 100K
D6028 MA165
C6030 6V330
R6005 3300
Q6007 2SB790
(SAFETY TAB Ⓛ : ON)
R6046 1500
R6051 3300
C6022 0.01
R6054 5600
Q6009 2SA1128 (REC:ON)
R6055 3300
Q6011 2SA1128 (DA. REC Ⓛ : ON)
R6048 33K
R6049 33K
Q6008 2SB641 (F. ERASE Ⓛ : ON)
R6091 5600
R6050 5600
D6031 MA165
R6086 10K
QR6016 DTA114EA (INSERT Ⓛ : ON)
10K
10K
C6031 16V10
QR6014 DTC144EA (REC Ⓗ : ON)
47K
47K
R6077 270
R6096 270
QR6010 DTA114EA (AFTER REC Ⓛ : ON)
10K
10K
9
10
11
12
13
14
15
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18

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SYSTEM CONTROL TRs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	Q6006			Q6007			Q6008			Q6009			Q6011			Q6015		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
PLAY	12.1	12.1	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
REC	12.0	0	12.0	12.0	12.0	11.3	12.0	11.8	11.2	12.0	11.9	11.2	12.0	11.9	11.2	5.0	5.7	5.6
F.F	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
REW	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6

REF. NO.	Q6016			Q6017			Q6018			Q6019		
MODE	E	C	B	E	C	B	E	C	B	E	C	B
STOP	13.4	15.1	14.5	13.4	13.4	4.9	0	13.4	0	0.7	13.4	0.6
PLAY	10.4	14.9	11.5	10.4	10.4	2.1	0	10.4	0	0.7	10.4	0.7
REC	10.4	14.9	11.5	10.4	10.4	2.0	0	10.4	0	0.7	10.4	0.7
F.F	13.3	15.0	14.5	13.3	13.3	4.9	0	13.3	0	0.7	13.3	0.6
REW	13.3	15.0	14.5	13.3	13.3	4.9	0	13.3	0	0.6	13.3	0.6

REF. NO.	QR6001			QR6004			QR6005			QR6006			QR6008			QR6010		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	4.8	0.3	0	5.1	0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	0.6	4.9
PLAY	0	4.8	0.4	0	5.1	5.1	0	0	4.9	4.7	4.6	0.1	5.1	0	5.1	5.2	−0.4	5.0
REC	0	4.8	0.3	0	5.1	5.1	0	12.0	0.2	4.8	4.7	0.2	5.1	0	5.1	5.1	−0.3	4.9
F.F	0	4.8	0.3	0	3.0	2.0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	−0.1	4.9
REW	0	4.8	0.2	0	3.0	2.0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	−0.1	4.9

REF. NO.	QR6011			QR6012			QR6013			QR6014			QR6015			QR6016		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	3.4	0.6	4.8	0.6	4.2	0	0.6	0	0	12.1	0	0	5.0	1.0	5.1	−0.2	4.9
PLAY	0	0.1	3.8	4.7	0.7	4.2	0	3.8	0	0	12.1	0	0	5.1	1.0	5.1	0.4	5.0
REC	0	0.1	3.8	4.8	0.7	4.2	0	3.7	0	0	0.1	4.0	0	5.1	0.3	5.1	−0.1	4.9
F.F	0	3.4	0.7	4.8	0.6	4.2	0	0.7	0	0	12.1	0	0	5.0	1.0	5.1	−0.2	4.9
REW	0	3.4	0.7	4.8	0.6	4.2	0	0.7	0	0	12.1	0	0	5.0	1.0	5.1	0.2	4.9

REF. NO.	QR6199		
MODE	E	C	B
STOP	0.1	0.6	0
PLAY	0.1	3.8	0
REC	0.2	3.8	0
F.F	0.1	0.7	0
REW	0.1	0.7	0

SYSTEM CONTROL ICs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	0	0	4.2	4.4	0	4.9	4.1	4.9	5.0	4.7	0.3	4.8	5.1	2.9	3.2	3.2	0.5
PLAY	0	0	4.9	0	0	4.2	4.4	0	5.0	4.0	5.0	5.1	4.7	0.3	4.8	5.1	2.9	3.2	3.2	0.5
REC	0	0	4.8	0	0	4.3	4.3	0	4.9	3.9	4.9	5.0	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5
F.F	0	0	4.7	0	0	4.2	4.4	0	4.9	4.0	4.9	4.9	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5
REW	0	0	4.7	0	0	4.2	4.4	0	4.9	4.0	4.9	4.9	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5

REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	2.0	2.0	0	2.0	5.1	4.8	0	0	4.8	4.7	4.9	4.8	4.8	0	0	4.9	4.9	4.9	12.0
PLAY	0	2.0	2.0	0	5.1	0	4.9	2.4	3.5	0	4.7	4.9	4.8	4.8	5.0	0	5.0	5.0	5.0	12.0
REC	0	2.0	2.0	0	5.1	0	4.8	2.4	3.0	0	4.6	4.8	4.7	4.7	0.1	0.1	4.9	4.9	0.3	0.1
F.F	0	2.0	2.0	0	2.0	5.1	2.7	0	0.3	4.8	4.6	4.8	4.7	4.7	0	0	4.9	4.9	4.9	12.0
REW	0	2.0	2.0	0	2.0	5.1	2.6	0	2.5	4.8	4.6	4.9	4.7	4.7	0	0	4.9	4.9	4.9	12.0

REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	12.1	1.0	1.9	0	0.1	4.9	4.9	0	0.1	4.9	5.1	0.1	0.1	0	4.6	0.2	4.2	0	4.9	0
PLAY	12.1	1.0	5.0	0	0.1	0	5.0	5.0	0.1	5.0	5.1	4.1	0.1	4.4	0	4.9	4.1	0.6	4.9	0
REC	0.3	0.3	4.9	0.1	0.1	0.1	4.9	4.9	0.2	4.9	5.1	4.0	4.4	4.5	4.7	0.2	4.2	0	4.9	0
F.F	12.1	1.0	4.9	0	0.1	0	5.0	4.9	0.1	4.9	5.1	0.1	0.1	0	4.6	0.2	4.2	0	4.9	0
REW	12.1	1.0	4.9	0	0.1	0	5.0	0	0.1	5.0	5.1	0.1	0.1	0	4.6	0.2	4.2	3.8	4.9	0

REF. NO.	IC6001				IC6002							
MODE	61	62	63	64	1	2	3	4	5	6	7	8
STOP	4.9	2.1	2.3	4.9	4.8	0.2	2.7	0	0	0.4	0	5.1
PLAY	5.0	2.1	2.3	5.0	4.9	4.7	2.7	0	0	0.4	0	5.2
REC	4.9	2.0	2.2	4.9	4.8	4.7	2.7	0	0	0.4	0	5.1
F.F	4.9	2.1	2.2	4.9	2.6	2.3	2.5	0	0	0.4	0	5.1
REW	4.9	2.1	2.2	4.9	2.6	2.3	2.5	0	0	0.4	0	5.1

REF. NO.	IC6003															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	0	5.1	0	0	4.9	0	–	0	0	0	0	0	0	0	0.4	5.1
PLAY	0	0	0	0	0	5.2	–	0	0	5.0	5.2	0	0	5.1	0.4	5.2
REC	0	0	0	0	0.1	5.1	–	0	0	4.9	5.1	0	0	5.1	2.9	5.1
F.F	0	1.0	0	0	0	2.5	–	0	0	4.9	2.0	0	0	2.0	1.0	5.1
REW	0	1.0	0	0	0	2.5	–	0	0	0	2.0	0	0	2.0	1.1	5.1

REF. NO.	IC6004		
MODE	1	2	3
STOP	5.1	5.1	0
PLAY	5.1	5.1	0
REC	5.1	5.1	0
F.F	5.1	5.1	0
REW	5.1	5.1	0

SYSTEM CONTROL TRs DC VOLTAGE CHART (S-VHS: LP MODE)

REF. NO.	Q6006			Q6007			Q6008			Q6009			Q6011			Q6015		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
PLAY	12.1	12.1	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
REC	12.0	0	12.0	12.1	12.1	11.3	12.1	11.8	11.2	12.1	11.9	11.2	12.1	11.9	11.2	5.0	5.7	5.6
F.F	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6
REW	12.1	0	12.1	12.1	12.1	11.4	12.1	0.3	12.1	12.1	0	12.1	12.1	0	12.1	5.0	5.7	5.6

REF. NO.	Q6016			Q6017			Q6018			Q6019		
MODE	E	C	B	E	C	B	E	C	B	E	C	B
STOP	13.3	15.1	14.5	13.3	13.3	4.9	0	13.3	0	0.7	13.3	0.7
PLAY	10.4	14.9	11.5	10.4	10.4	2.1	0	10.4	0	0.7	10.4	0.7
REC	10.4	14.9	11.5	10.4	10.4	2.1	0	10.4	0	0.7	10.4	0.7
F.F	13.3	15.0	14.5	13.3	13.3	4.9	0	13.3	0	0.7	13.3	0.7
REW	13.3	15.0	14.5	13.3	13.3	4.9	0	13.3	0	0.7	13.3	0.7

REF. NO.	QR6001			QR6004			QR6005			QR6006			QR6008			QR6010		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	4.8	0.3	0	5.1	0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	0.6	4.9
PLAY	0	4.8	0.4	0	5.1	5.1	0	0	4.9	4.7	4.6	0.1	5.1	0	5.1	5.2	−0.4	5.0
REC	0	4.8	0.3	0	5.1	5.1	0	12.0	0.2	4.8	4.7	0.2	5.1	0	5.1	5.1	−0.3	4.9
F.F	0	4.8	0.3	0	3.0	2.0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	−0.1	4.9
REW	0	4.8	0.2	0	3.0	2.0	0	12.1	0.2	4.8	4.7	0.1	5.1	0	5.1	5.1	−0.1	4.9

REF. NO.	QR6011			QR6012			QR6013			QR6014			QR6015			QR6016		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	3.4	0.6	4.8	0.6	4.2	0	0.6	0	0	12.1	0	0	5.0	1.0	5.1	−0.2	4.9
PLAY	0	0.1	3.8	4.7	0.7	4.2	0	3.8	0	0	12.1	0	0	5.1	1.0	5.1	0.4	5.0
REC	0	0.1	3.8	4.8	0.7	4.2	0	3.7	0	0	0.1	4.0	0	5.1	0.3	5.1	−0.1	4.9
F.F	0	3.4	0.7	4.8	0.6	4.2	0	0.7	0	0	12.1	0	0	5.0	1.0	5.1	−0.2	4.9
REW	0	3.4	0.7	4.8	0.6	4.2	0	0.7	0	0	12.1	0	0	5.0	1.0	5.1	0.2	4.9

REF. NO.	QR6199		
MODE	E	C	B
STOP	0.1	0.6	0
PLAY	0.1	3.8	0
REC	0.2	3.8	0
F.F	0.1	0.7	0
REW	0.1	0.7	0

SYSTEM CONTROL ICs DC VOLTAGE CHART (S-VHS: LP MODE)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	0	0	4.2	4.4	0	4.9	4.1	4.9	5.0	4.7	0.3	4.8	5.1	2.9	3.2	3.2	0.5
PLAY	0	0	4.9	0	0	4.2	4.4	0	5.0	4.0	5.0	5.1	4.7	0.3	4.8	5.1	2.9	3.2	3.2	0.5
REC	0	0	4.8	0	0	4.3	4.3	0	4.9	3.9	4.9	5.0	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5
F.F	0	0	4.7	0	0	4.2	4.4	0	4.9	4.0	4.9	4.9	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5
REW	0	0	4.7	0	0	4.2	4.4	0	4.9	4.0	4.9	4.9	4.6	0.3	4.8	5.1	2.9	3.2	3.2	0.5

REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	2.0	2.0	4.5	2.0	5.1	4.8	0	0	4.8	4.7	4.9	4.8	4.8	0	0	4.9	4.9	4.9	12.0
PLAY	0	2.0	2.0	4.5	5.1	0	4.9	2.4	3.5	0	4.7	4.9	4.8	4.8	5.0	0	5.0	5.0	5.0	12.0
REC	0	2.0	2.0	4.5	5.1	0	4.8	2.4	3.0	0	4.6	4.8	4.7	4.7	0.1	0.1	4.9	4.9	0.3	0.1
F.F	0	2.0	2.0	4.5	2.0	5.1	2.7	0	0.3	4.8	4.6	4.8	4.7	4.7	0	0	4.9	4.9	4.9	12.0
REW	0	2.0	2.0	4.5	2.0	5.1	2.6	0	2.5	4.8	4.6	4.9	4.7	4.7	0	0	4.9	4.9	4.9	12.0

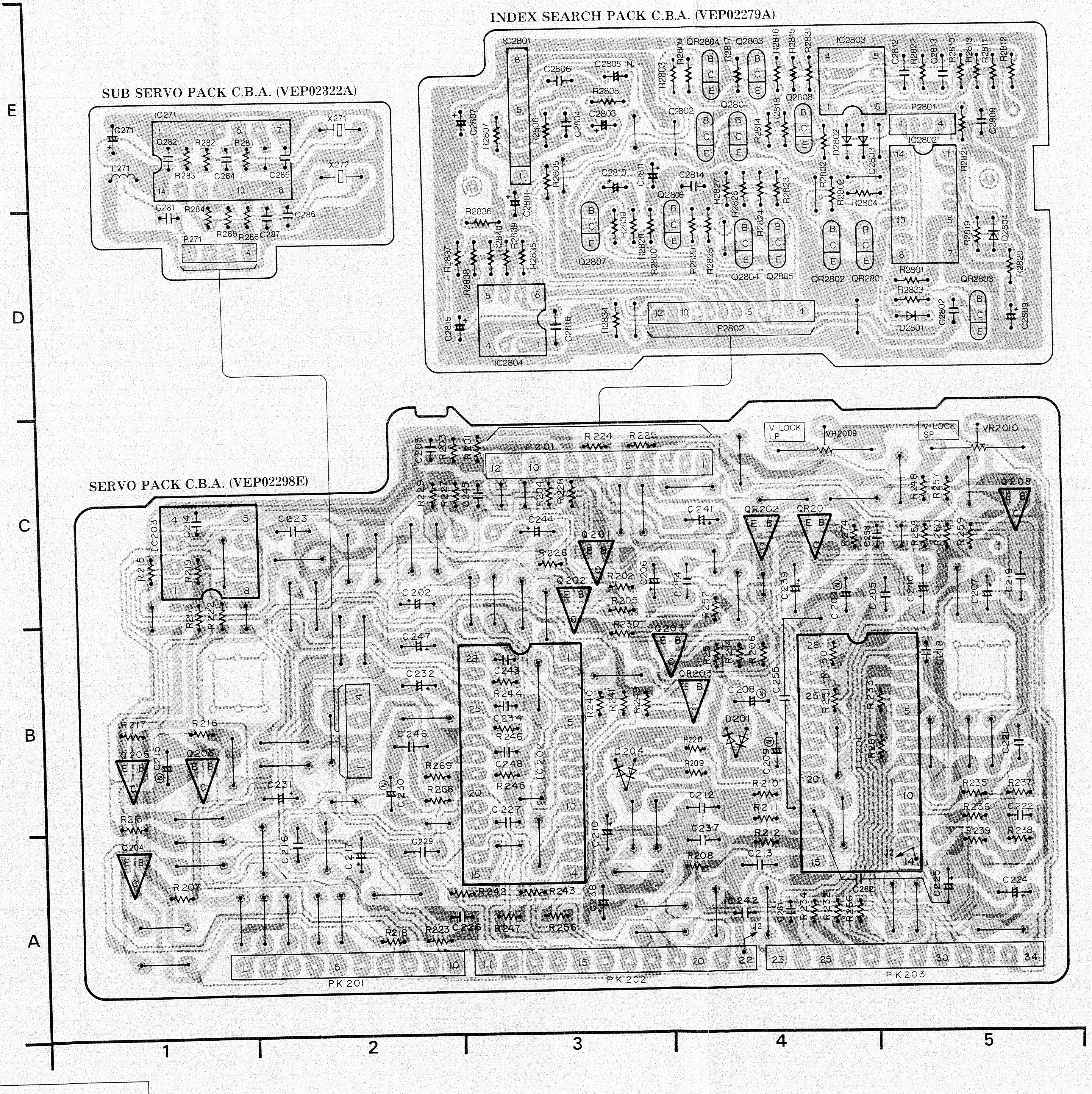
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	12.1	1.0	1.9	0	0.1	4.9	4.9	0	0.1	4.9	5.1	0.1	0.1	0	4.6	0.2	4.2	0	4.9	0
PLAY	12.1	1.0	5.0	0	0.1	0	5.0	5.0	0.1	5.0	5.1	4.1	0.1	4.4	0	4.9	4.1	0.6	4.9	0
REC	0.3	0.3	4.9	0.1	0.1	0.1	4.9	4.9	0.2	4.9	5.1	4.0	4.4	4.5	4.7	0.2	4.2	0	4.9	0
F.F	12.1	1.0	4.9	0	0.1	0	5.0	4.9	0.1	4.9	5.1	0.1	0.1	0	4.6	0.2	4.2	0	4.9	0
REW	12.1	1.0	4.9	0	0.1	0	5.0	0	0.1	5.0	5.1	0.1	0.1	0	4.6	0.2	4.2	3.8	4.9	0

REF. NO.	IC6001				IC6002							
MODE	61	62	63	64	1	2	3	4	5	6	7	8
STOP	4.9	2.1	2.3	4.9	4.8	0.2	2.7	0	0	0.4	0	5.1
PLAY	5.0	2.1	2.3	5.0	4.9	4.7	2.7	0	0	0.4	0	5.2
REC	4.9	2.0	2.2	4.9	4.8	4.7	2.7	0	0	0.4	0	5.1
F.F	4.9	2.1	2.2	4.9	2.6	2.3	2.5	0	0	0.4	0	5.1
REW	4.9	2.1	2.2	4.9	2.6	2.3	2.5	0	0	0.4	0	5.1

REF. NO.	IC6003															
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
STOP	0	5.1	0	0	4.9	0	–	0	0	0	0	0	0	0	0.4	5.1
PLAY	0	0	0	0	0	5.2	–	0	0	5.0	5.2	0	0	5.1	0.4	5.2
REC	0	0	0	0	0.1	5.1	–	0	0	4.9	5.1	0	0	5.1	2.9	5.1
F.F	0	1.0	0	0	0	2.5	–	0	0	4.9	2.0	0	0	2.0	1.0	5.1
REW	0	1.0	0	0	0	2.5	–	0	0	0	2.0	0	0	2.0	1.1	5.1

REF. NO.	IC6004		
MODE	1	2	3
STOP	5.1	5.1	0
PLAY	5.1	5.1	0
REC	5.1	5.1	0
F.F	5.1	5.1	0
REW	5.1	5.1	0

3-10. SERVO PACK C.B.A. (VEP02298E) & INDEX SEARCH PACK C.B.A. (VEP02279A)


INDEX SEARCH PACK C.B.A. (VEP02279A)
SUB SERVO PACK C.B.A. (VEP02322A)
SERVO PACK C.B.A. (VEP02298E)
E
D
C
B
A
1
2
3
4
5
IC2801
IC2802
IC2803
IC2804
IC271
IC201
IC202
IC203
P2801
P2802
P271
P201
V-LOCK LP
V-LOCK SP
VR2009
VR2010
PK 201
PK 202
PK 203

SERVO PACK C.B.A. & INDEX SEARCH PACK C.B.A.	
Transistor	
Q201	C-3
Q202	C-3
Q203	B-4
Q204	A-1
Q205	B-1
Q206	B-1
Q208	C-5
Q2801	E-4
Q2802	E-4
Q2803	E-4
Q2804	D-4
Q2805	D-4
Q2806	D-4
Q2807	D-3
Q2808	E-4
Transistor & Resistor	
QR201	C-4
QR202	C-4
QR203	B-4
QR2801	D-4
QR2802	D-4
QR2803	D-5
QR2804	E-4
Integrated Circuit	
IC201	B-4
IC202	B-3
IC203	C-1
IC271	E-1
IC2801	E-3
IC2802	E-5
IC2803	E-4
IC2804	D-3
Adjustment	
VR2009	C-4
VR2010	C-5
Connector	
P201	C-3
P271	D-1
P2801	E-5
P2802	D-4

ADDRESS INFORMATION

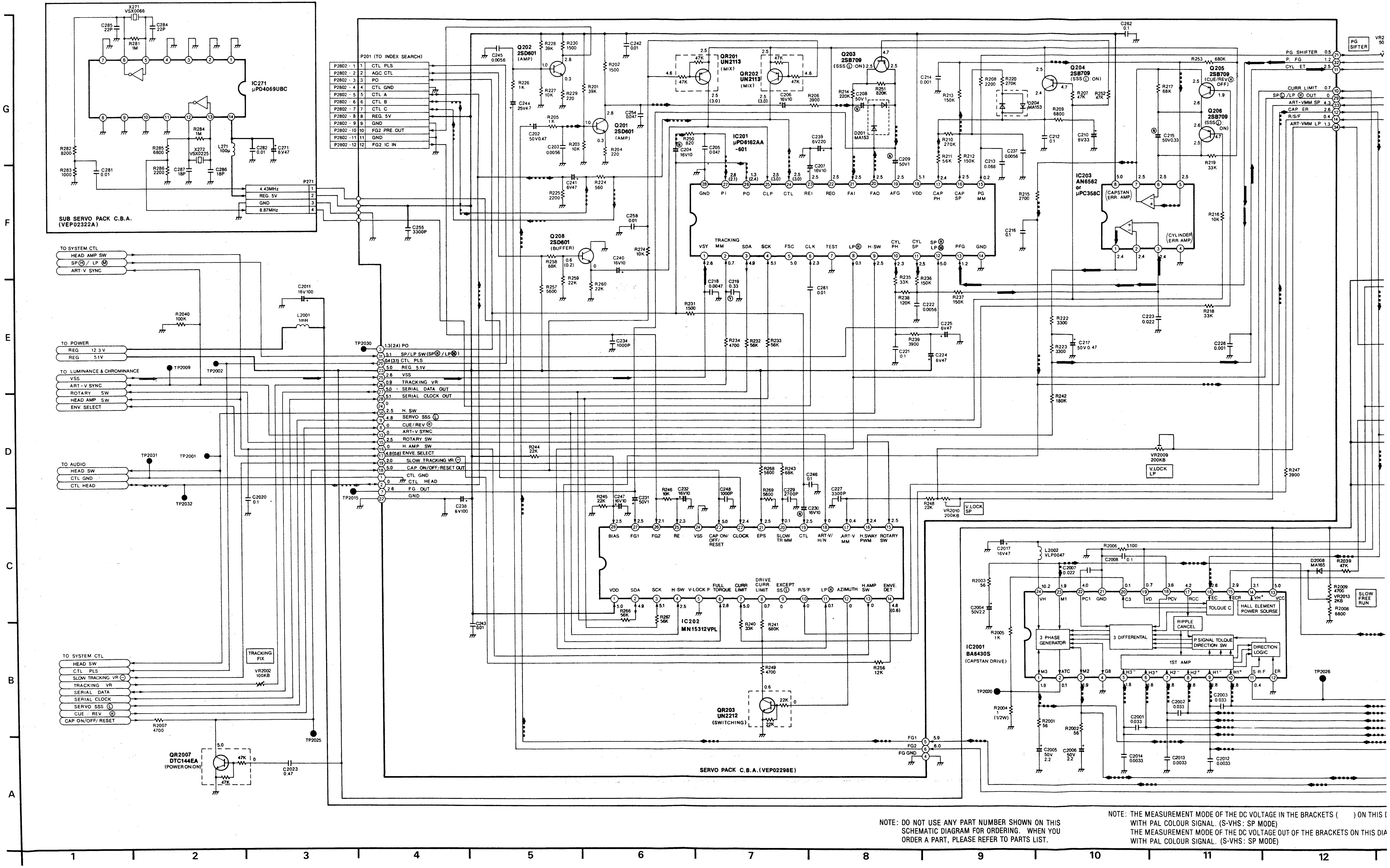
Back Page:
SYSTEM CONTROL Section

3-11. SERVO SCHEMATIC DIAGRAM

CYLINDER SERVO PHASE LOOP

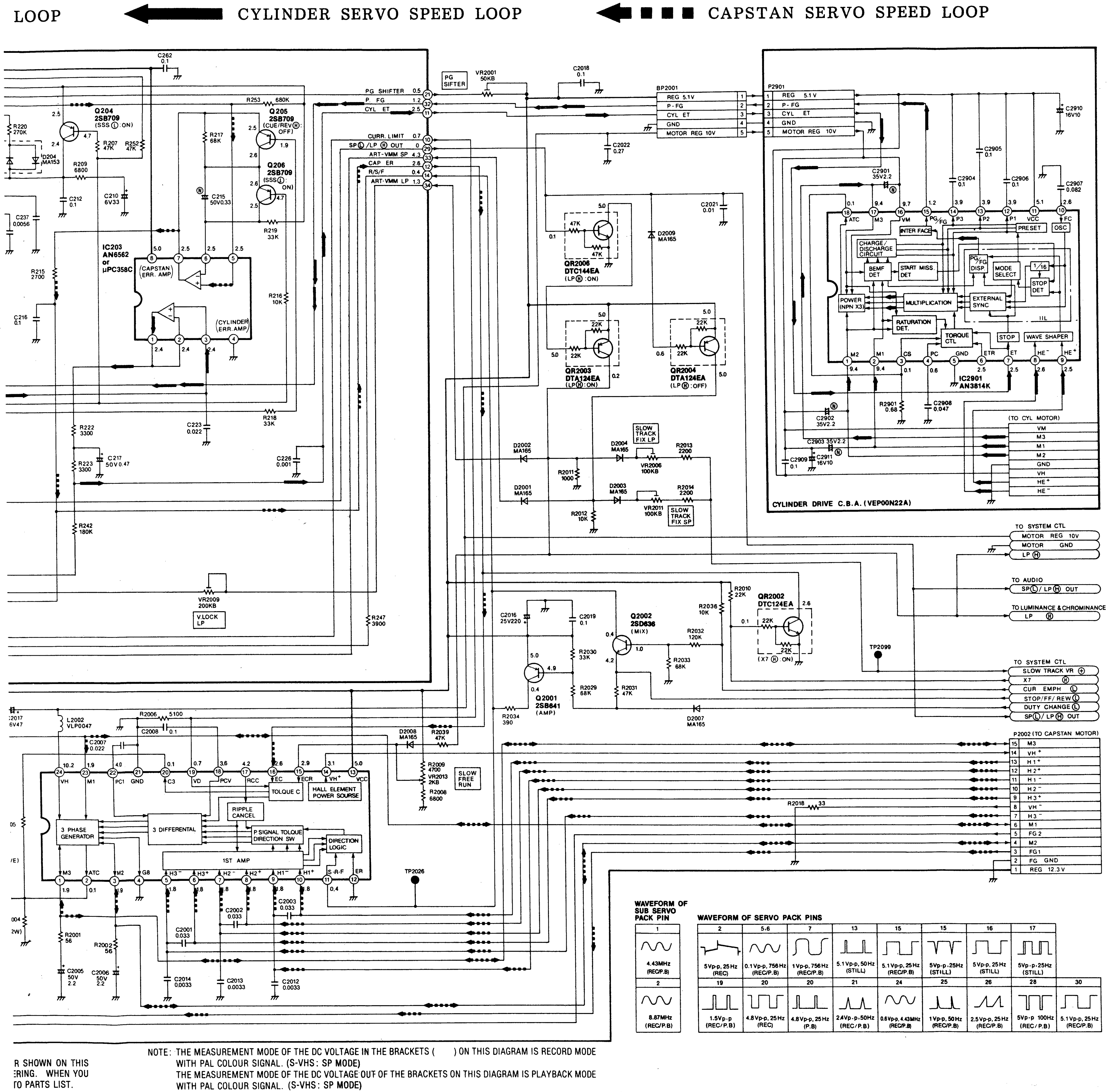
CAPSTAN SERVO PHASE LOOP

CYLINDER SERVO SPEED L


SUB SERVO PACK C.B.A. (VEP02322A)
IC271 μPD4069UBC
X271 VSX0066
X272 VSX0225
P271
4.43MHz
REG. 5V
GND
8.87MHz
P201 (TO INDEX SEARCH)
CTL PLS
AGC CTL
PO
CTL GND
CTL A
CTL B
CTL C
REG. 5V
GND
FG2 PRE OUT
GND
FG2 IC IN
TO SYSTEM CTL
HEAD AMP SW
SP Ⓗ / LP Ⓜ
ART-V SYNC
TO POWER
REG 12.3V
REG 5.1V
TO LUMINANCE & CHROMINANCE
VSS
ART-V SYNC
ROTARY SW
HEAD AMP SW
ENV. SELECT
TO AUDIO
HEAD SW
CTL GND
CTL HEAD
TO SYSTEM CTL
HEAD SW
CTL PLS
SLOW TRACKING VR
TRACKING VR
SERIAL DATA
SERIAL CLOCK
SERVO SSS
CUE REV
CAP ON/OFF/RESET
TRACKING FIX
VR2002 100KB
QR2007 DTC144EA (POWER ON:ON)
TP2009
TP2002
TP2030
TP2031
TP2001
TP2032
TP2015
TP2025
Q202 2SD601 (AMP)
Q201 2SD601 (AMP)
Q208 2SD601 (BUFFER)
QR201 UN2113 (MIX)
QR202 UN2113 (MIX)
Q203 2SB709 (SSS Ⓛ : ON)
Q204 2SB709 (SSS Ⓛ : ON)
Q205 2SB709 (CUE/REV Ⓡ : OFF)
Q206 2SB709 (SSS Ⓛ : ON)
D201 MA153
D204 MA153
IC201 μPD6162AA -601
GND PI PO CLP CTL REI REO FAI FAO AFG VDD CAP PH CAP SP PG MM
VSY TRACKING MM SDA SCK FSC CLK TEST LP Ⓡ H-SW CYL PH CYL SP SP Ⓗ LP Ⓜ PFG GND
IC203 AN6562 or μPC358C
(CAPSTAN ERR. AMP)
(CYLINDER ERR. AMP)
PG SHIFTER
P. FG
CYL ET
CURR LIMIT
SP Ⓛ /LP Ⓗ OUT
ART-VMM SP
CAP ER
R/S/F
ART-VMM LP
VR2009 200KB
V.LOCK LP
VR2010 200KB
V.LOCK SP
IC202 MN15312VPL
BIAS FG1 FG2 RE VSS CAP ON/OFF/RESET CLOCK EPS SLOW TR MM CTL ART-V/H/N ART-V MM H.SWAY PWM ROTARY SW
VDD SDA SCK H-SW V-LOCK P FULL TORQUE CURR LIMIT DRIVE CURR. LIMIT EXCEPT SS Ⓛ R/S/F LP Ⓡ AZIMUTH H.AMP SW ENVE. DET
QR203 UN2212 (SWITCHING)
SERVO PACK C.B.A. (VEP02298E)
FG1
FG2
FG GND
IC2001 BA6430S (CAPSTAN DRIVE)
3 PHASE GENERATOR
3 DIFFERENTAL
TOLQUE C
HALL ELEMENT POWER SOURSE
RIPPLE CANCEL
P SIGNAL TOLQUE DIRECTION SW
DIRECTION LOGIC
1ST AMP
VH M1 PC1 GND C3 VD PCV RCC EC ECR VH⁺ VCC
M3 ATC M2 G8 H3⁻ H3⁺ H2⁻ H2⁺ H1⁻ H1⁺ S-R-F ER
L2002 VLP0047
D2008 MA165
VR2013 2KB
SLOW FREE RUN
TP2020
TP2026
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

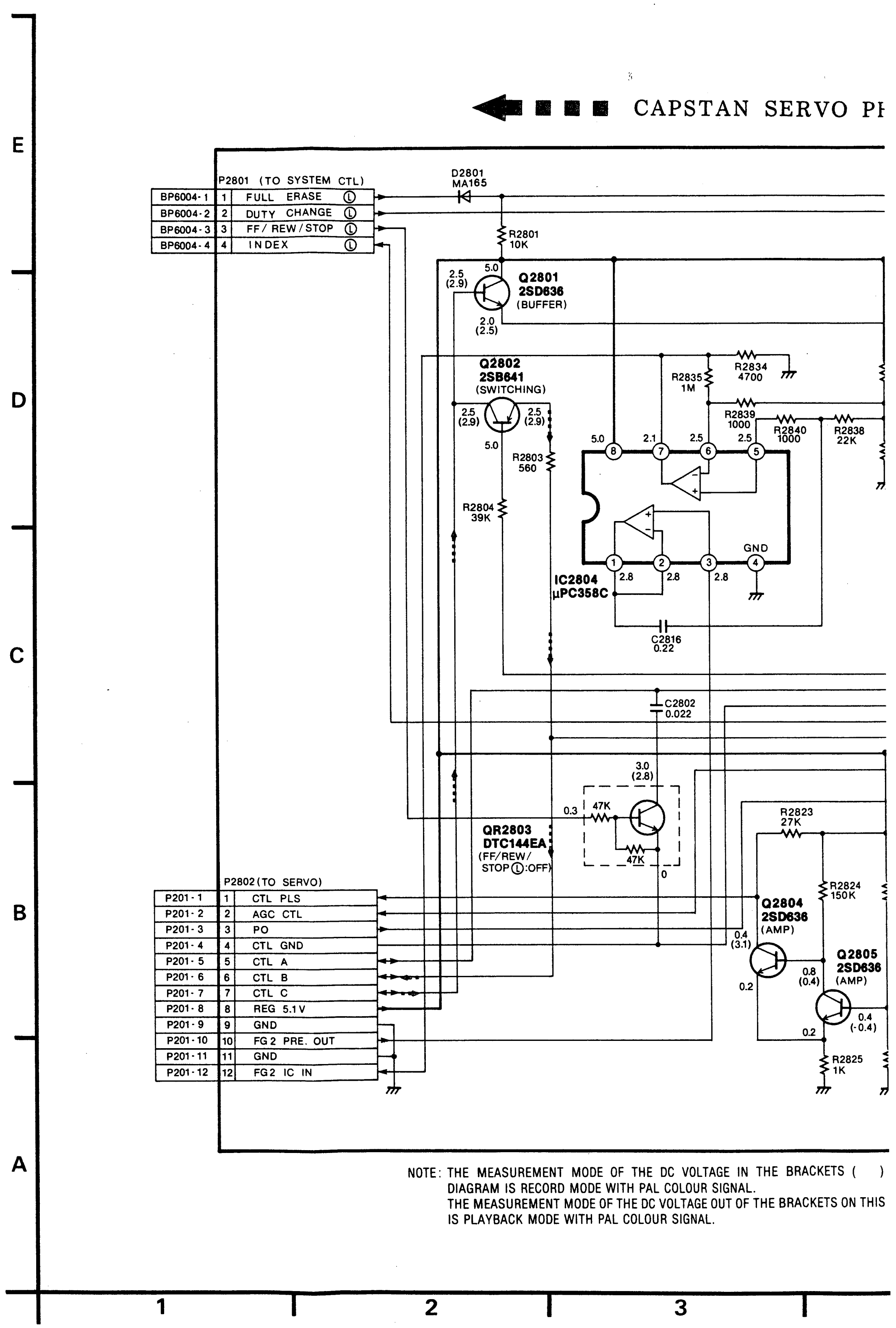
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS
WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIA
WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)


LOOP
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
IC203 AN6562 or µPC358C
(CAPSTAN) (ERR. AMP)
(CYLINDER) (ERR. AMP)
Q204 2SB709 (SSS Ⓛ ON)
Q205 2SB709 (CUE/REV Ⓗ: OFF)
Q206 2SB709 (SSS Ⓛ ON)
PG SIFTER
PG SHIFTER
P. FG
CYL ET
CURR. LIMIT
SP Ⓛ /LP Ⓗ OUT
ART-VMM SP
CAP ER
R/S/F
ART-VMM LP
BP2001
REG 5.1V
P-FG
CYL ET
GND
MOTOR REG 10V
P2901
QR2006 DTC144EA (LP Ⓗ :ON)
QR2003 DTA124EA (LP Ⓗ :ON)
QR2004 DTA124EA (LP Ⓗ :OFF)
SLOW TRACK FIX LP
SLOW TRACK FIX SP
IC2901 AN3814K
CHARGE/ DISCHARGE CIRCUIT
BEMF DET
START MISS. DET
MODE SELECT
STOP DET
POWER (NPN X3)
MULTIPLICATION
EXTERNAL SYNC
RATURATION DET.
TORQUE CTL
WAVE SHAPER
INTER FACE
PRESET
OSC
(TO CYL MOTOR)
CYLINDER DRIVE C.B.A. (VEP00N22A)
TO SYSTEM CTL
MOTOR REG 10V
MOTOR GND
LP Ⓗ
TO AUDIO
SP Ⓛ / LP Ⓗ OUT
TO LUMINANCE & CHROMINANCE
LP Ⓗ
V.LOCK LP
Q2002 2SD636 (MIX)
QR2002 DTC124EA (X7 Ⓗ :ON)
Q2001 2SB641 (AMP)
TP2099
SLOW TRACK VR
X7
CUR EMPH
STOP/FF/REW
DUTY CHANGE
SP Ⓛ / LP Ⓗ OUT
P2002 (TO CAPSTAN MOTOR)
SLOW FREE RUN
3 PHASE GENERATOR
3 DIFFERENTIAL
TOLQUE C
HALL ELEMENT POWER SOURSE
RIPPLE CANCEL
P SIGNAL TOLQUE DIRECTION SW
DIRECTION LOGIC
1ST AMP
TP2026
WAVEFORM OF SUB SERVO PACK PIN
WAVEFORM OF SERVO PACK PINS
4.43MHz (REC/P.B)
8.87MHz (REC/P.B)
5Vp-p, 25Hz (REC)
0.1Vp-p, 756Hz (REC/P.B)
1Vp-p, 756Hz (REC/P.B)
5.1Vp-p, 50Hz (STILL)
5.1Vp-p, 25Hz (REC/P.B)
5Vp-p, 25Hz (STILL)
5Vp-p, 25Hz (STILL)
5Vp-p, 25Hz (STILL)
1.5Vp-p (REC/P.B)
4.8Vp-p, 25Hz (REC)
4.8Vp-p, 25Hz (P.B)
2.4Vp-p, 50Hz (REC/P.B)
0.8Vp-p, 4.43MHz (REC/P.B)
1Vp-p, 50Hz (REC/P.B)
2.5Vp-p, 25Hz (REC/P.B)
5Vp-p 100Hz (REC/P.B)
5.1Vp-p, 25Hz (REC/P.B)
10
11
12
13
14
15
16

R SHOWN ON THIS
ERING. WHEN YOU
TO PARTS LIST.

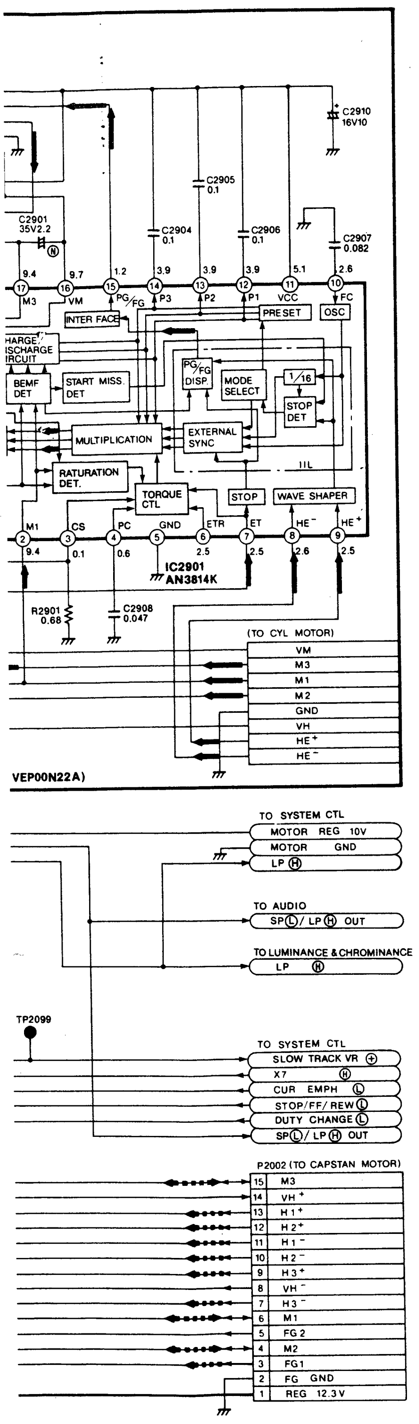
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS : SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS : SP MODE)

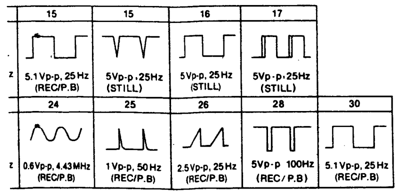
3-12. INDEX SEARCH PACK SCHEMATIC DIAGRAM


CAPSTAN SERVO PI
P2801 (TO SYSTEM CTL)
BP6004-1 1 FULL ERASE Ⓛ
BP6004-2 2 DUTY CHANGE Ⓛ
BP6004-3 3 FF/REW/STOP Ⓛ
BP6004-4 4 INDEX Ⓛ
D2801 MA165
R2801 10K
Q2801 2SD636 (BUFFER)
Q2802 2SB641 (SWITCHING)
IC2804 µPC358C
C2816 0.22
C2802 0.022
QR2803 DTC144EA (FF/REW/STOP Ⓛ :OFF)
P2802 (TO SERVO)
P201-1 1 CTL PLS
P201-2 2 AGC CTL
P201-3 3 PO
P201-4 4 CTL GND
P201-5 5 CTL A
P201-6 6 CTL B
P201-7 7 CTL C
P201-8 8 REG 5.1V
P201-9 9 GND
P201-10 10 FG 2 PRE. OUT
P201-11 11 GND
P201-12 12 FG2 IC IN
Q2804 2SD636 (AMP)
Q2805 2SD636 (AMP)
E
D
C
B
A
1
2
3

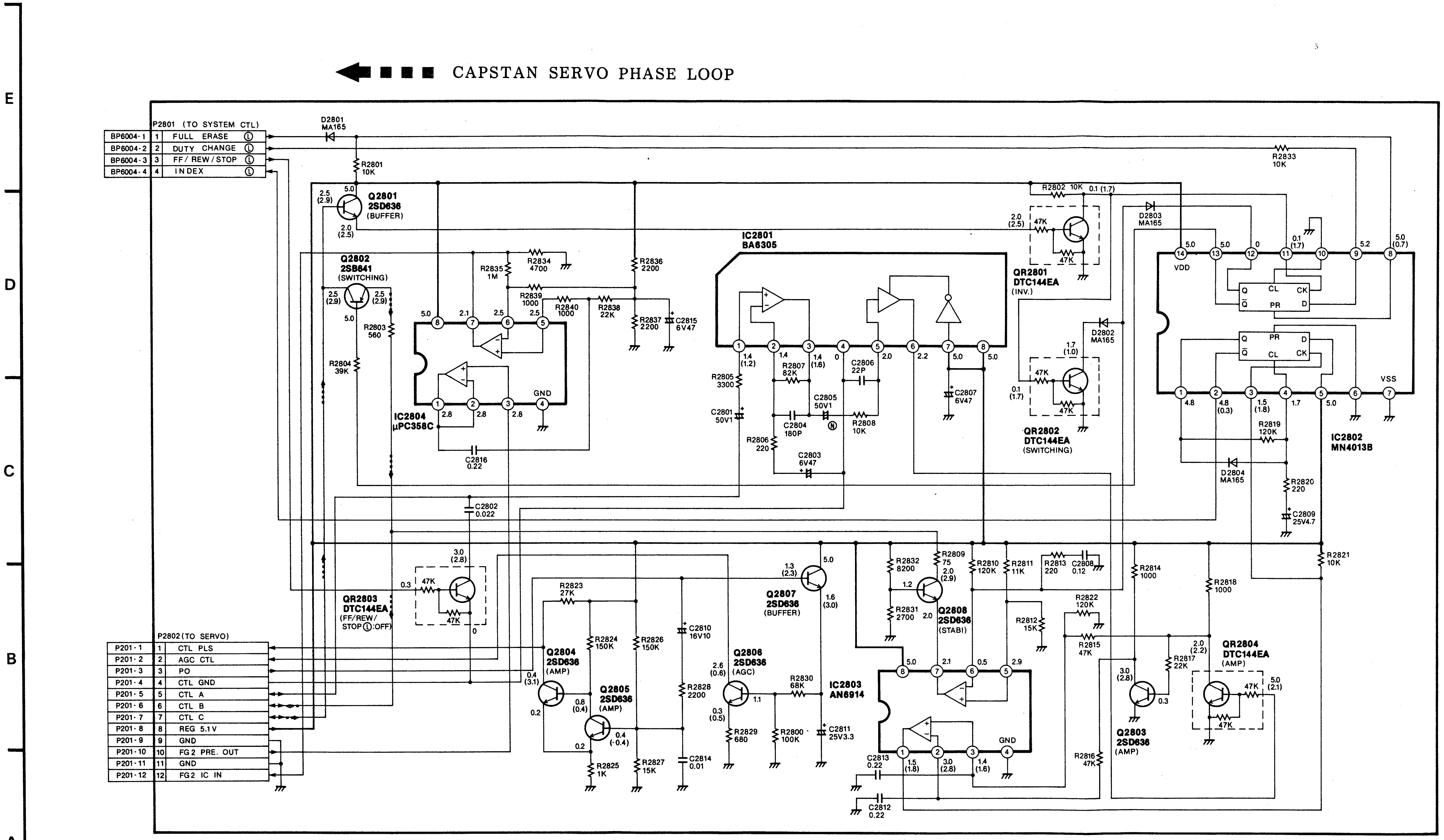
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

SPEED LOOP


IC2901
AN3814K
INTER FACE
MULTIPLICATION
EXTERNAL SYNC
RATURATION DET.
TORQUE CTL
WAVE SHAPER
MODE SELECT
STOP DET
(TO CYL MOTOR)
VEP00N22A)
TO SYSTEM CTL
MOTOR REG 10V
MOTOR GND
TO AUDIO
TO LUMINANCE & CHROMINANCE
TP2099
P2002 (TO CAPSTAN MOTOR)


15
15
16
17
5.1Vp-p, 25Hz (REC/P.B)
5Vp-p, 25Hz (STILL)
5Vp-p, 25Hz (STILL)
5Vp-p, 25Hz (STILL)
24
25
26
28
30
0.8Vp-p, 4.43MHz (REC/P.B)
1Vp-p, 50Hz (REC/P.B)
2.5Vp-p, 25Hz (REC/P.B)
5Vp-p 100Hz (REC/P.B)
5.1Vp-p, 25Hz (REC/P.B)
16

3-12. INDEX SEARCH PACK SCHEMATIC DIAGRAM


CAPSTAN SERVO PHASE LOOP
P2801 (TO SYSTEM CTL)
BP6004-1 1 FULL ERASE Ⓛ
BP6004-2 2 DUTY CHANGE Ⓛ
BP6004-3 3 FF/REW/STOP Ⓛ
BP6004-4 4 INDEX Ⓛ
Q2801 2SD636 (BUFFER)
Q2802 2SB841 (SWITCHING)
IC2804 μPC358C
IC2801 BA6305
QR2801 DTC144EA (INV.)
QR2802 DTC144EA (SWITCHING)
IC2802 MN4013B
QR2803 DTC144EA (FF/REW/STOP Ⓛ:OFF)
P2802 (TO SERVO)
P201-1 1 CTL PLS
P201-2 2 AGC CTL
P201-3 3 PO
P201-4 4 CTL GND
P201-5 5 CTL A
P201-6 6 CTL B
P201-7 7 CTL C
P201-8 8 REG 5.1V
P201-9 9 GND
P201-10 10 FG2 PRE. OUT
P201-11 11 GND
P201-12 12 FG2 IC IN
Q2804 2SD636 (AMP)
Q2805 2SD636 (AMP)
Q2806 2SD636 (AGC)
Q2807 2SD636 (BUFFER)
Q2808 2SD636 (STABI)
IC2803 AN6914
Q2803 2SD636 (AMP)
QR2804 DTC144EA (AMP)
E
D
C
B
A
1
2
3
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

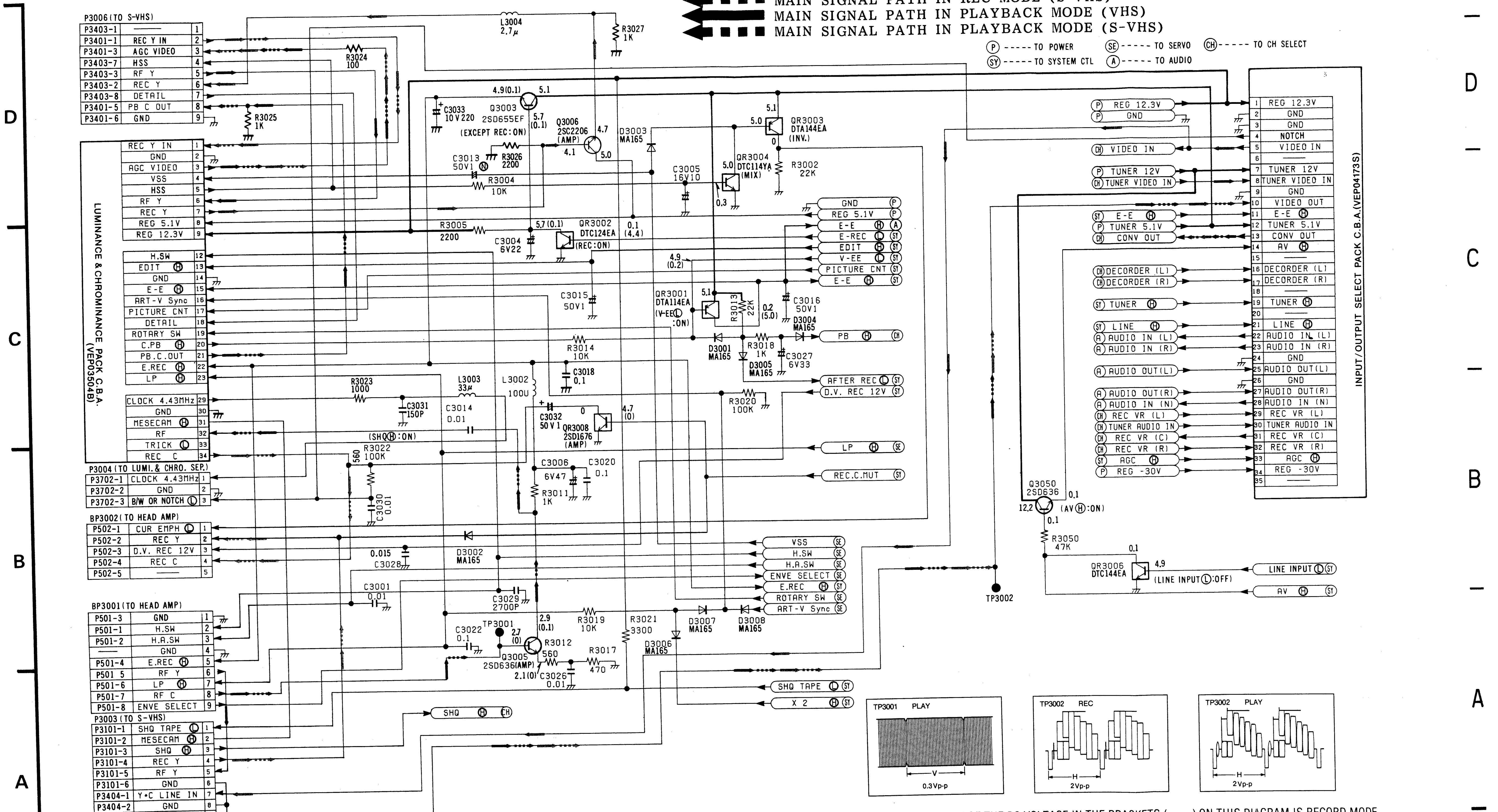
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Next Page:
LUMINANCE & CHROMINANCE Section

3-13. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE (VHS)
MAIN SIGNAL PATH IN REC MODE (S-VHS)
MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)
MAIN SIGNAL PATH IN PLAYBACK MODE (S-VHS)

Ⓟ ----- TO POWER Ⓢⓔ ----- TO SERVO Ⓒⓗ ----- TO CH SELECT
Ⓢⓨ ----- TO SYSTEM CTL Ⓐ ----- TO AUDIO


P3006 (TO S-VHS)
P3403-1 1
P3401-1 REC Y IN 2
P3401-3 AGC VIDEO 3
P3403-7 HSS 4
P3403-3 RF Y 5
P3403-2 REC Y 6
P3403-8 DETAIL 7
P3401-5 PB C OUT 8
P3401-6 GND 9
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)
REC Y IN 1
GND 2
AGC VIDEO 3
VSS 4
HSS 5
RF Y 6
REC Y 7
REG 5.1V 8
REG 12.3V 9
H.SW 12
EDIT Ⓗ 13
GND 14
E-E Ⓗ 15
ART-V Sync 16
PICTURE CNT 17
DETAIL 18
ROTARY SW 19
C.PB Ⓗ 20
PB.C.OUT 21
E.REC Ⓗ 22
LP Ⓗ 23
CLOCK 4.43MHz 29
GND 30
MESECAM Ⓗ 31
RF 32
TRICK Ⓛ 33
REC C 34
P3004 (TO LUMI. & CHRO. SEP.)
P3702-1 CLOCK 4.43MHz 1
P3702-2 GND 2
P3702-3 B/W OR NOTCH Ⓛ 3
BP3002 (TO HEAD AMP)
P502-1 CUR EMPH Ⓛ 1
P502-2 REC Y 2
P502-3 D.V. REC 12V 3
P502-4 REC C 4
P502-5 5
BP3001 (TO HEAD AMP)
P501-3 GND 1
P501-1 H.SW 2
P501-2 H.A.SW 3
GND 4
P501-4 E.REC Ⓗ 5
P501 5 RF Y 6
P501-6 LP Ⓗ 7
P501-7 RF C 8
P501-8 ENVE SELECT 9
P3003 (TO S-VHS)
P3101-1 SHQ TAPE Ⓛ 1
P3101-2 MESECAM Ⓗ 2
P3101-3 SHQ Ⓗ 3
P3101-4 REC Y 4
P3101-5 RF Y 5
P3101-6 GND 6
P3404-1 Y•C LINE IN 7
P3404-2 GND 8
P3404-3 Y•C LINE OUT 9
P3404-4 GND 10
L3004 2.7μ
R3027 1K
R3024 100
R3025 1K
4.9(0.1) 5.1
C3033 10V220
Q3003 2SD655EF (EXCEPT REC:ON)
5.7 (0.1)
Q3006 2SC2206 (AMP)
4.7
4.1
5.0
C3013 50V1 Ⓝ
R3026 2200
R3004 10K
D3003 MA165
C3005 16V10
QR3004 DTC114YA (MIX)
5.0
0.3
QR3003 DTA144EA (INV.)
5.1
5.0
0
R3002 22K
R3005 2200
C3004 6V22
5.7(0.1)
QR3002 DTC124EA (REC:ON)
0.1 (4.4)
4.9 (0.2)
C3015 50V1
QR3001 DTA114EA (V-EE Ⓛ :ON)
5.1
R3013 22K
0.2 (5.0)
C3016 50V1
D3004 MA165
D3001 MA165
R3018 1K
D3005 MA165
C3027 6V33
R3014 10K
C3018 0.1
R3023 1000
L3003 33μ
L3002 100U
C3031 150P
C3014 0.01
C3032 50V1
QR3008 2SD1676 (AMP)
0
4.7 (0)
R3020 100K
(SHQ Ⓗ :ON)
R3022 100K
560
C3030 0.01
C3006 6V47
C3020 0.1
R3011 1K
0.015
C3028
D3002 MA165
C3001 0.01
C3029 2700P
TP3001
C3022 0.1
2.9 (0.1)
2.7 (0)
Q3005 2SD636 (AMP)
R3012 560
2.1(0)
C3026 0.01
R3019 10K
R3017 470
R3021 3300
D3006 MA165
D3007 MA165
D3008 MA165
GND Ⓟ
REG 5.1V Ⓟ
E-E Ⓗ Ⓐ
E-REC Ⓛ Ⓢⓨ
EDIT Ⓗ Ⓢⓨ
V-EE Ⓛ Ⓢⓨ
PICTURE CNT Ⓢⓨ
E-E Ⓗ Ⓢⓨ
PB Ⓗ Ⓒⓗ
AFTER REC Ⓛ Ⓢⓨ
D.V. REC 12V Ⓢⓨ
LP Ⓗ Ⓢⓔ
REC.C.MUT Ⓢⓨ
VSS Ⓢⓔ
H.SW Ⓢⓔ
H.A.SW Ⓢⓔ
ENVE SELECT Ⓢⓔ
E.REC Ⓗ Ⓢⓨ
ROTARY SW Ⓢⓔ
ART-V Sync Ⓢⓔ
SHQ TAPE Ⓛ Ⓢⓨ
X 2 Ⓗ Ⓢⓨ
SHQ Ⓗ Ⓒⓗ
TP3002
Ⓟ REG 12.3V
Ⓟ GND
Ⓒⓗ VIDEO IN
Ⓟ TUNER 12V
Ⓒⓗ TUNER VIDEO IN
Ⓢⓨ E-E Ⓗ
Ⓟ TUNER 5.1V
Ⓒⓗ CONV OUT
Ⓒⓗ DECORDER (L)
Ⓒⓗ DECORDER (R)
Ⓢⓨ TUNER Ⓗ
Ⓢⓨ LINE Ⓗ
Ⓐ AUDIO IN (L)
Ⓐ AUDIO IN (R)
Ⓐ AUDIO OUT(L)
Ⓐ AUDIO OUT(R)
Ⓐ AUDIO IN (N)
Ⓒⓗ REC VR (L)
Ⓒⓗ TUNER AUDIO IN
Ⓒⓗ REC VR (C)
Ⓒⓗ REC VR (R)
Ⓢⓨ AGC Ⓗ
Ⓟ REG -30V
INPUT/OUTPUT SELECT PACK C.B.A.(VEP04173S)
1 REG 12.3V
2 GND
3 GND
4 NOTCH
5 VIDEO IN
6
7 TUNER 12V
8 TUNER VIDEO IN
9 GND
10 VIDEO OUT
11 E-E Ⓗ
12 TUNER 5.1V
13 CONV OUT
14 AV Ⓗ
15
16 DECORDER (L)
17 DECORDER (R)
18
19 TUNER Ⓗ
20
21 LINE Ⓗ
22 AUDIO IN (L)
23 AUDIO IN (R)
24 GND
25 AUDIO OUT(L)
26 GND
27 AUDIO OUT(R)
28 AUDIO IN (N)
29 REC VR (L)
30 TUNER AUDIO IN
31 REC VR (C)
32 REC VR (R)
33 AGC Ⓗ
34 REG -30V
35
Q3050 2SD636
0.1
12.2
(AV Ⓗ :ON)
0.1
R3050 47K
0.1
QR3006 DTC144EA
4.9
(LINE INPUT Ⓛ :OFF)
LINE INPUT Ⓛ Ⓢⓨ
AV Ⓗ Ⓢⓨ
TP3001 PLAY
V
0.3Vp-p
TP3002 REC
H
2Vp-p
TP3002 PLAY
H
2Vp-p
D
C
B
A

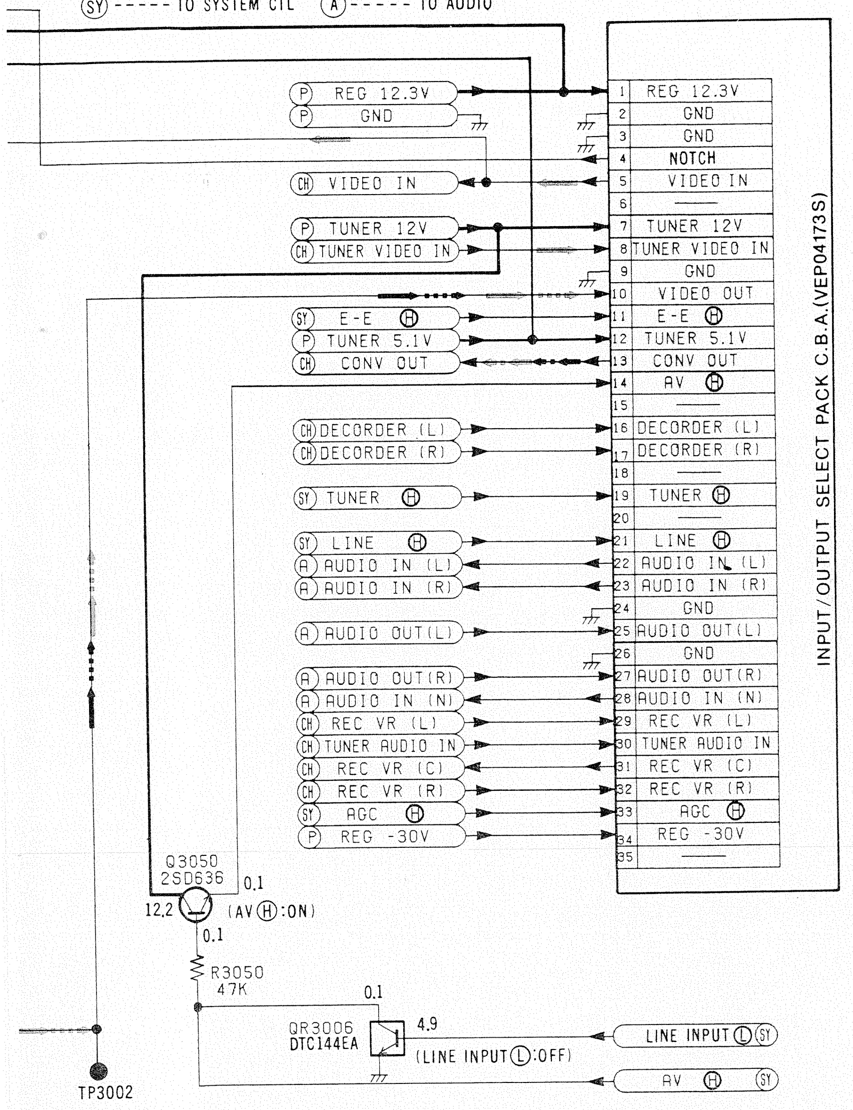
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

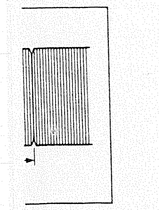
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

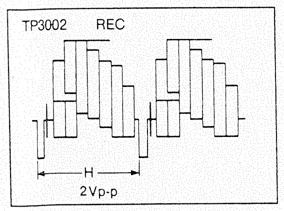
1 2 3 4 5 6

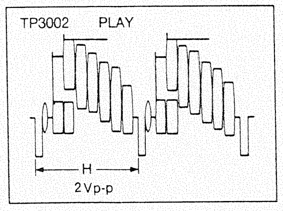
REC MODE (VHS)
REC MODE (S-VHS)
PLAYBACK MODE (VHS)
PLAYBACK MODE (S-VHS)

(P) ----- TO POWER (SE) ----- TO SERVO (CH) ----- TO CH SELECT
(SY) ----- TO SYSTEM CTL (A) ----- TO AUDIO


REG 12.3V
GND
VIDEO IN
TUNER 12V
TUNER VIDEO IN
E-E
TUNER 5.1V
CONV OUT
DECORDER (L)
DECORDER (R)
TUNER
LINE
AUDIO IN (L)
AUDIO IN (R)
AUDIO OUT(L)
AUDIO OUT(R)
AUDIO IN (N)
REC VR (L)
TUNER AUDIO IN
REC VR (C)
REC VR (R)
AGC
REG -30V
1 REG 12.3V
2 GND
3 GND
4 NOTCH
5 VIDEO IN
6
7 TUNER 12V
8 TUNER VIDEO IN
9 GND
10 VIDEO OUT
11 E-E
12 TUNER 5.1V
13 CONV OUT
14 AV
15
16 DECORDER (L)
17 DECORDER (R)
18
19 TUNER
20
21 LINE
22 AUDIO IN (L)
23 AUDIO IN (R)
24 GND
25 AUDIO OUT(L)
26 GND
27 AUDIO OUT(R)
28 AUDIO IN (N)
29 REC VR (L)
30 TUNER AUDIO IN
31 REC VR (C)
32 REC VR (R)
33 AGC
34 REG -30V
35
INPUT/OUTPUT SELECT PACK C.B.A.(VEP04173S)
Q3050
2SD636
0.1
12.2
(AV (H):ON)
0.1
R3050
47K
0.1
QR3006
DTC144EA
4.9
(LINE INPUT (L):OFF)
LINE INPUT (L)
AV (H)
TP3002



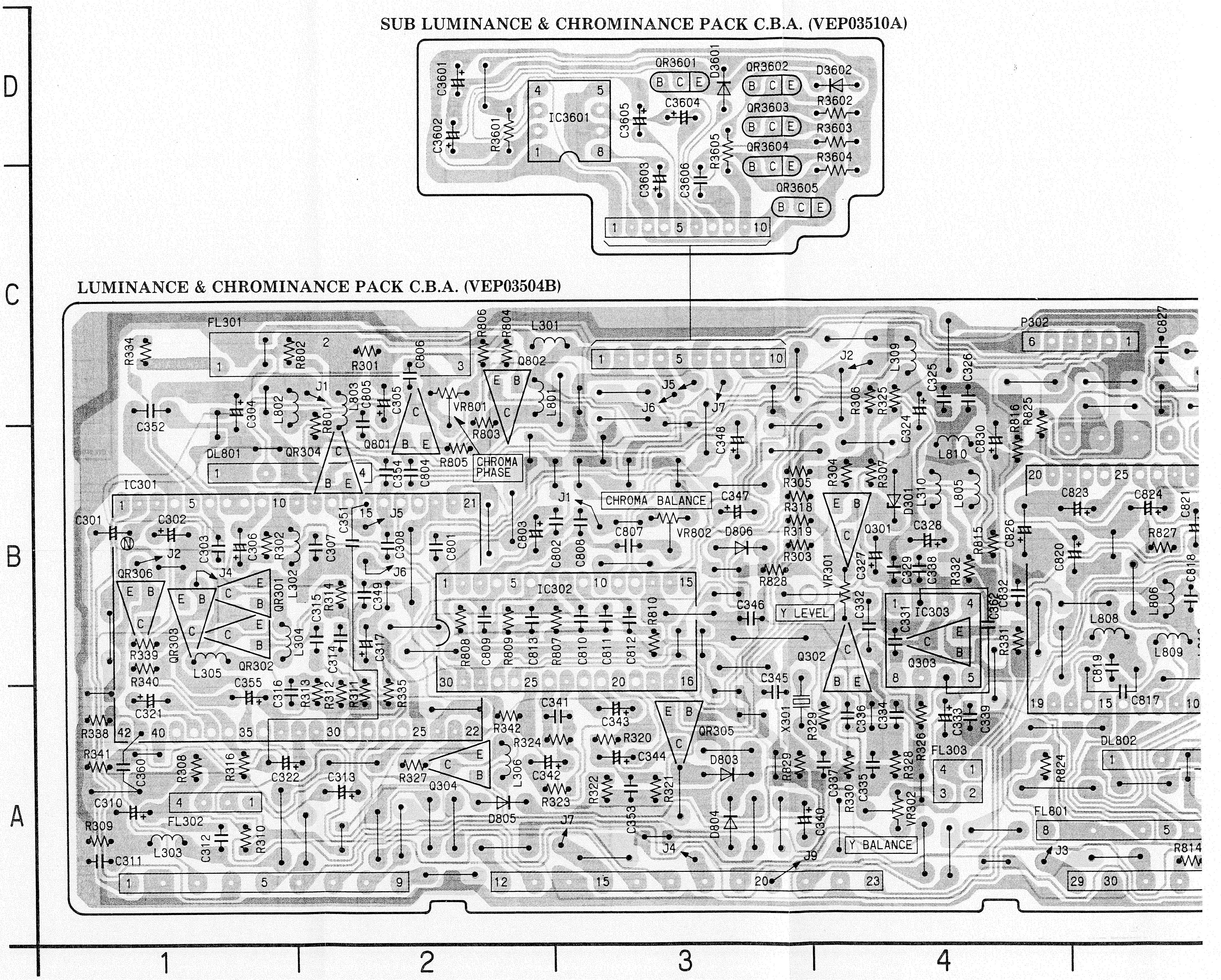




E OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE
L. (S-VHS: SP MODE)
E OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
L. (S-VHS: SP MODE)

5 6

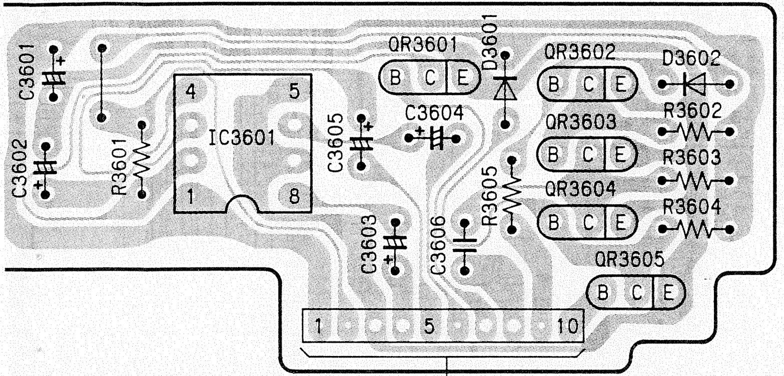
3-14. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)


SUB LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A)

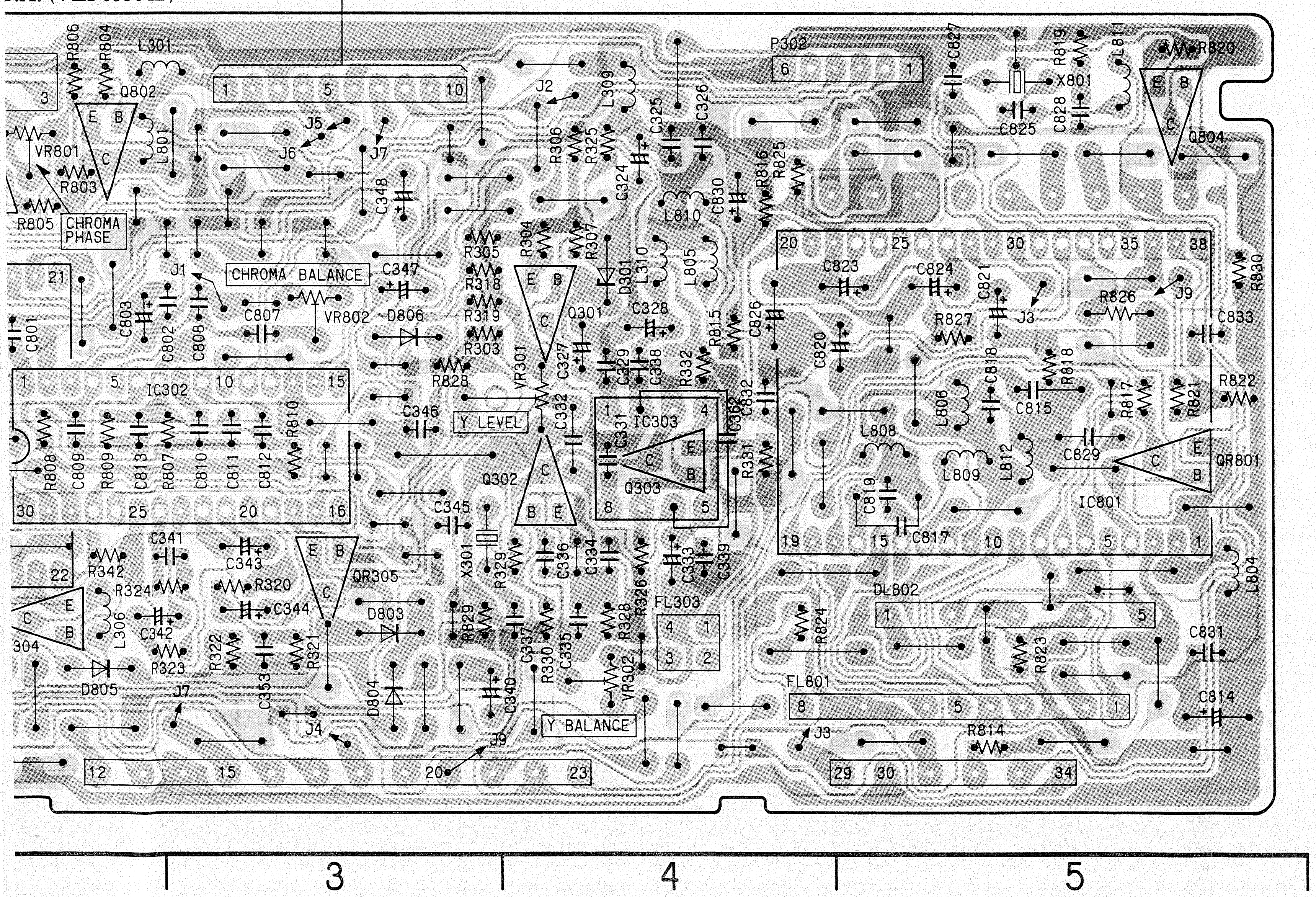
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)
D
C
B
A
1
2
3
4
C3601
C3602
R3601
IC3601
C3603
C3604
C3605
C3606
R3605
QR3601
D3601
QR3602
D3602
R3602
QR3603
R3603
QR3604
R3604
QR3605
B C E
FL301
R334
R802
R301
C806
R806
R804
L301
Q802
P302
C827
C352
C304
L802
R801
L803
C805
C305
VR801
R803
L801
J5
J6
J7
C348
R306
R325
L309
C325
C326
C324
L810
C830
R816
R825
J2
DL801
QR304
Q801
R805
CHROMA PHASE
C354
C804
IC301
C302
C301
J2
C303
C306
R302
C307
C351
J5
C308
C801
J1
C803
C802
C808
CHROMA BALANCE
C347
C807
VR802
D806
R305
R318
R319
R303
R304
R307
Q301
D301
L310
L805
C328
C329
C338
R332
R815
C826
C823
C824
C821
R827
C820
C818
QR306
J4
QR301
J6
C349
C315
R314
IC302
R828
VR301
C327
C346
Y LEVEL
C332
IC303
C362
C832
L806
L808
L809
QR303
R339
R340
L305
QR302
L304
C314
C317
R808
C809
R809
C813
R807
C810
C811
C812
R810
C331
Q303
Q302
C345
X301
R331
C819
C817
C355
C316
R313
R312
R311
R335
C321
R338
R341
C360
R308
R316
C322
C313
R327
Q304
L306
R342
C341
R324
C343
R320
C344
QR305
D803
R329
C336
C334
R326
C333
C339
FL303
DL802
R824
C310
FL302
R309
L303
C311
C312
R310
D805
C342
R323
J7
R322
C353
R321
D804
J4
J9
R829
C337
C340
R330
C335
VR302
R328
Y BALANCE
FL801
J3
R814
1
5
9
10
12
15
20
23
29
30

ACK C.B.A. (VEP03504B)

UMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A)


C3601
C3602
R3601
IC3601
C3605
C3603
C3606
C3604
QR3601
D3601
QR3602
D3602
R3602
QR3603
R3603
R3605
QR3604
R3604
QR3605
B C E
1
5
10

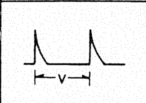
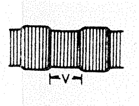
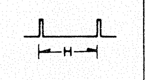
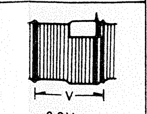
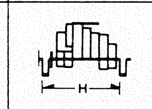
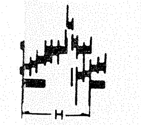
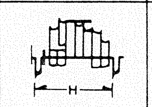
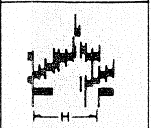
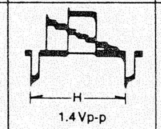
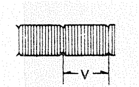
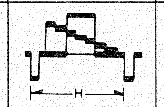
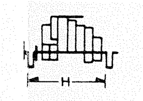
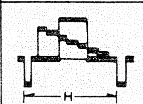
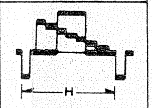
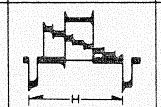
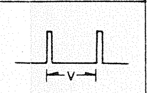
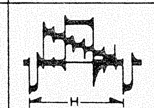
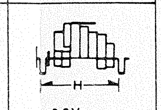
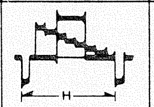
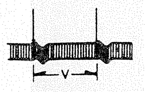
B.A. (VEP03504B)


R806
R804
L301
Q802
VR801
R803
R805
CHROMA PHASE
J1
CHROMA BALANCE
VR802
D806
C807
C803
C802
C808
C801
IC302
R808
C809
R809
C813
R807
C810
C811
C812
R810
C341
C343
R342
R324
R320
C344
C342
L306
R323
R322
C353
R321
QR305
D803
D805
D804
J7
J4
P302
J2
J5
J6
J7
C348
C347
R305
R318
R319
R303
R828
R304
R307
R306
R325
C324
C325
C326
L309
L810
C830
R816
R825
Q301
D301
L310
L805
C328
C327
C329
C338
R332
R815
C826
C832
VR301
Y LEVEL
C346
C332
Q302
IC303
Q303
C331
C362
R331
C345
X301
R329
C336
C334
R326
C333
C339
FL303
R330
C335
C337
C340
R328
VR302
Y BALANCE
J9
C827
R819
L811
X801
C828
C825
R820
Q804
C823
C824
C821
J3
R826
J9
R830
R827
C820
C818
R818
C815
C833
R817
R821
R822
L806
L808
L809
L812
C829
QR801
C819
C817
IC801
DL802
R824
R823
C831
FL801
R814
J3
C814
L804
E B C
3
4
5

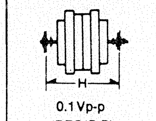
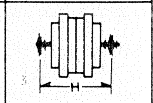
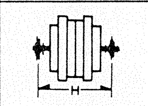
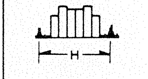
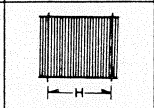
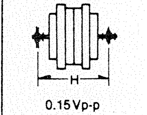
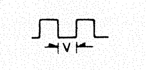
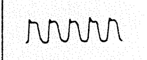
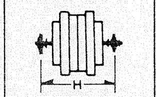
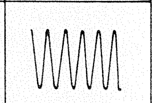
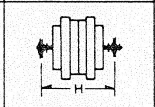
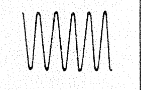
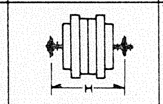
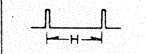
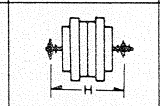
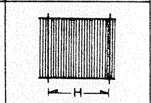
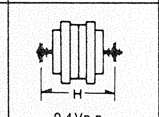
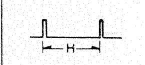
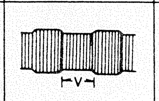
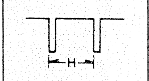
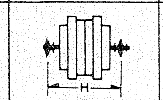
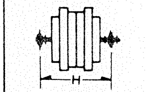
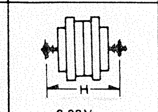
LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor	
Q301	B-4
Q302	B-4
Q303	B-4
Q304	A-2
Q801	B-2
Q802	C-2
Q804	C-5
Transistor & Resistor	
QR301	B-1
QR302	B-1
QR303	B-1
QR304	B-2
QR305	A-3
QR306	B-1
QR801	B-5
QR3601	D-3
QR3602	D-3
QR3603	D-3
QR3604	D-3
QR3605	C-3
Integrated Circuit	
IC301	B-1
IC302	B-2
IC303	B-4
IC801	B-5
IC3601	D-3
Adjustment	
VR301	B-4
VR302	A-4
VR801	C-2
VR802	B-3
Connector	
P302	C-4

ADDRESS INFORMATION

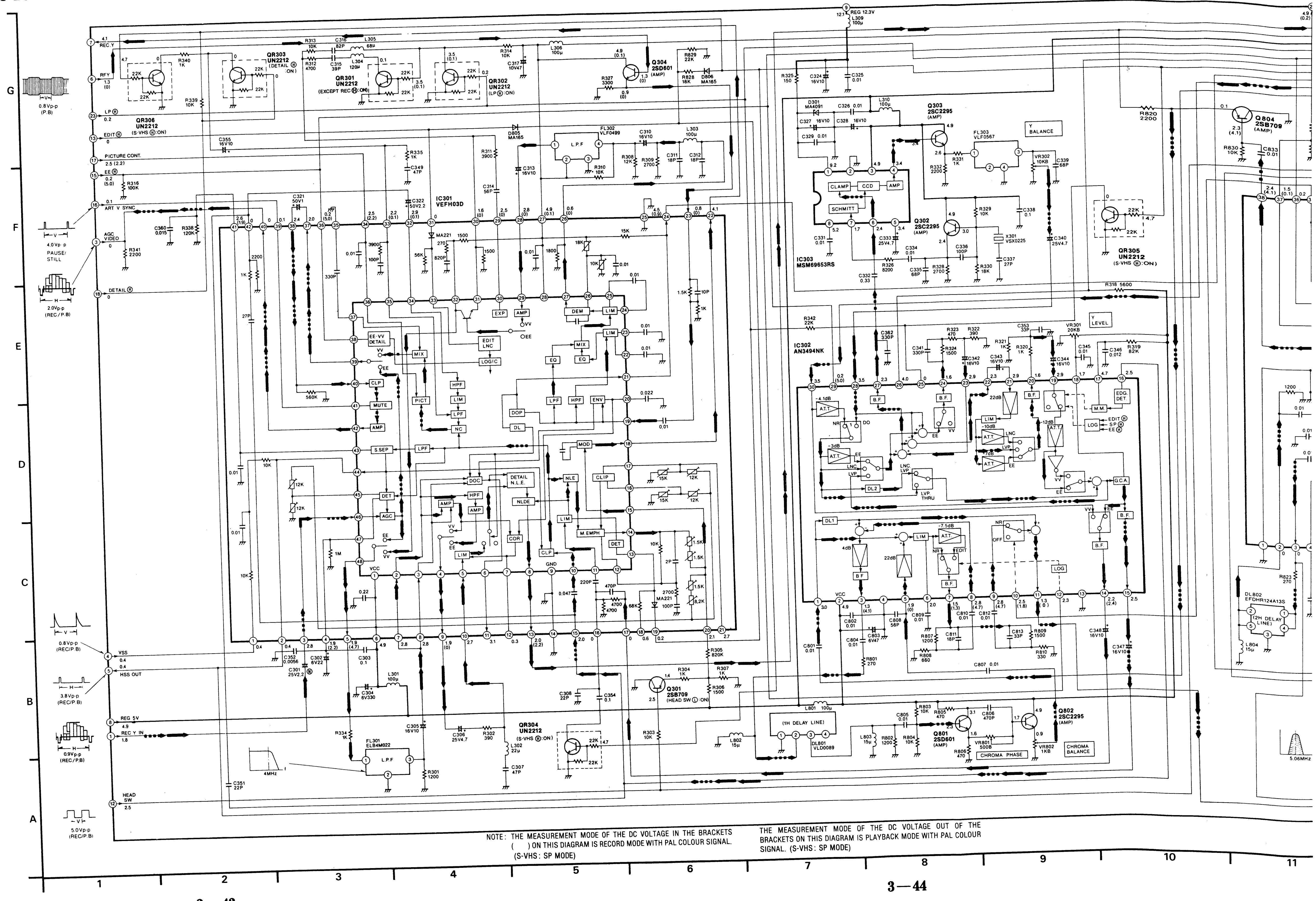
IC301 (VEFH03D)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1	 V 0.8 Vp-p (REC/P.B)	23	 V 1.0 Vp-p (P.B)
2	 H 3.8 Vp-p (REC/P.B)	26	 V 0.8 Vp-p (P.B)
3	 H 0.9 Vp-p (REC/P.B)	28	 H 0.7 Vp-p (P.B)
5	 H 0.9 Vp-p (REC)	30	 H 2.0 Vp-p (P.B)
5	 H 1.4 Vp-p (P.B)	33	 V 0.15 Vp-p (P.B)
7, 8	 H 0.4 Vp-p (REC) 0.66 Vp-p (P.B)	37, 38	 H 0.8 Vp-p (REC)
11	 H 0.27 Vp-p (REC) 0.42 Vp-p (P.B)	37, 38	 H 0.8 Vp-p (P.B)
13	 H 0.8 Vp-p (REC) 1.4 Vp-p (P.B)	39	 V 4.0 Vp-p (PAUSE/STILL)
15	 H 0.9 Vp-p (REC/P.B)	40	 H 2.0 Vp-p (REC/P.B)
17	 H 0.8 Vp-p (REC/P.B)	41	 V 0.36 Vp-p (REC/P.B)

IC801 (VEFH04A)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 H 0.1 Vp-p (REC/P.B)	17	 H 0.33 Vp-p (REC) 0.2 Vp-p (P.B)
3	 H 0.5 Vp-p (REC) 0.6 Vp-p (P.B)	18	 H 1.0 Vp-p (REC/P.B)
5	 H 0.18 Vp-p (REC/P.B)	19	 H 0.15 Vp-p (REC/P.B)
6	 V 5.0 Vp-p (REC/P.B)	28	 0.7 Vp-p (REC/P.B)
7	 H 0.5 Vp-p (REC) 0.35 Vp-p (P.B)	29	 1.0 Vp-p (REC/P.B)
9	 H 0.45 Vp-p (REC) 0.3 Vp-p (P.B)	31	 0.7 Vp-p (REC/P.B)
10	 H 0.4 Vp-p (REC) 0.7 Vp-p (P.B)	32	 H 4.0 Vp-p (REC/P.B)
11	 H 0.3 Vp-p (REC) 0.17 Vp-p (P.B)	33	 H 0.62 Vp-p (REC/P.B)
12	 H 0.4 Vp-p (REC/P.B)	34	 H 5.0 Vp-p (REC/P.B)
13	 V 0.25 Vp-p (P.B)	35	 H 5.0 Vp-p (REC/P.B)
14	 H 0.25 Vp-p (REC) 0.18 Vp-p (P.B)	38	 H 0.8 Vp-p (P.B)
15	 H 0.38 Vp-p (REC)		

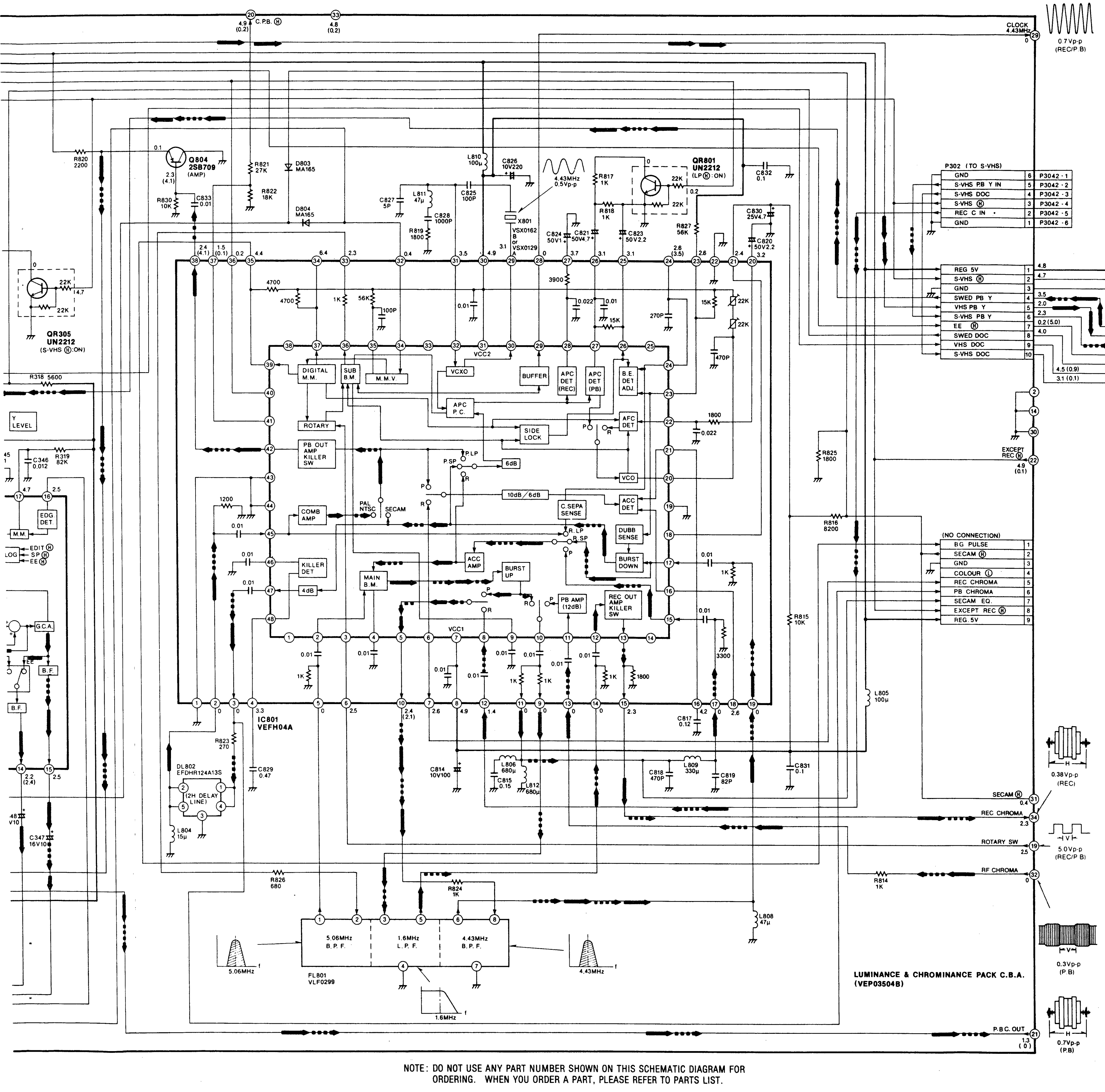
3-15. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

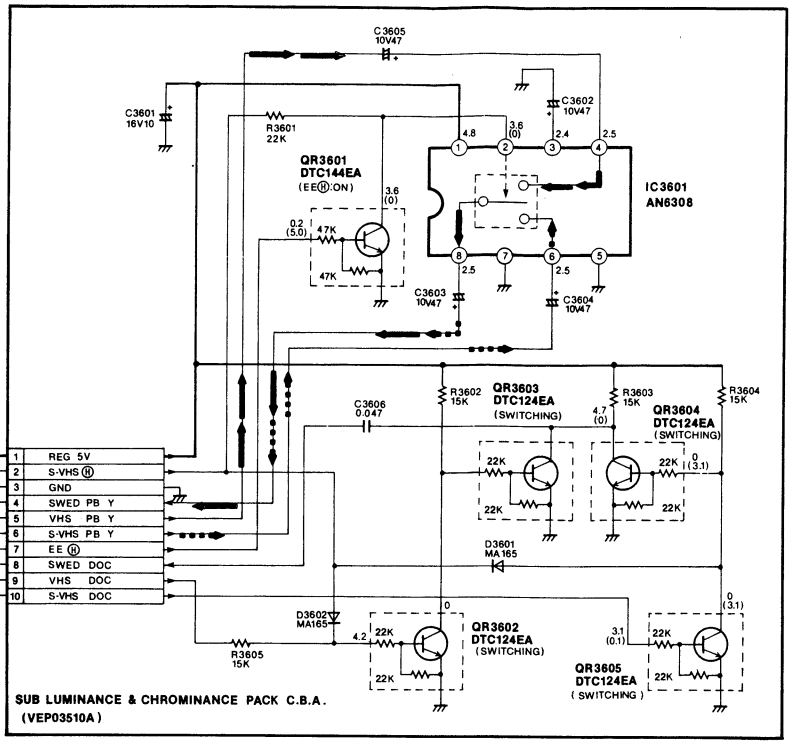


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
REC Y
RFY
LP Ⓡ
EDIT Ⓡ
PICTURE CONT.
EE Ⓡ
ART V SYNC
AGC VIDEO
DETAIL Ⓡ
VSS
HSS OUT
REG 5V
REC Y IN
HEAD SW
0.8Vp-p (P.B)
4.0Vp-p PAUSE/STILL
2.0Vp-p (REC/P.B)
0.8Vp-p (REC/P.B)
3.8Vp-p (REC/P.B)
0.9Vp-p (REC/P.B)
5.0Vp-p (REC/P.B)
QR303 UN2212 (DETAIL Ⓡ :ON)
QR301 UN2212 (EXCEPT REC Ⓢ:ON)
QR302 UN2212 (LP Ⓡ:ON)
QR306 UN2212 (S-VHS Ⓚ:ON)
Q304 2SD601 (AMP)
IC301 VEFH03D
FL302 VLF0499
L.P.F
D805 MA165
D806 MA165
IC303 MSM69653RS
CLAMP
CCD
AMP
SCHMITT
Q303 2SC2295 (AMP)
Q302 2SC2295 (AMP)
FL303 VLF0567
Y BALANCE
X301 VSX0225
Q804 2SB709 (AMP)
QR305 UN2212 (S-VHS Ⓗ:ON)
IC302 AN3494NK
Y LEVEL
EDG. DET
EE-VV DETAIL
EDIT LNC
LOGIC
MIX
CLP
MUTE
S.SEP
LPF
HPF
LIM
PICT
NC
EXP
DEM
EQ
DOP
DL
ENV
MOD
DOC
DETAIL N.L.E.
NLDE
NLE
CLIP
M.EMPH
DET
COR
AGC
VCC
GND
A.T.T
DL1
DL2
G.C.A
LOG
B.F
LNC
LVP
VV
LVP THRU
M.M
DL802 EFDHR124A13S (2H DELAY LINE)
Q301 2SB709 (HEAD SW Ⓛ:ON)
QR304 UN2212 (S-VHS Ⓗ:ON)
FL301 ELB4M022
4MHz
(1H DELAY LINE)
DL801 VLD0089
Q801 2SD601 (AMP)
Q802 2SC2295 (AMP)
CHROMA PHASE
CHROMA BALANCE
5.06MHz

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)


IC801 VEFH04A
Q804 2SB709 (AMP)
QR801 UN2212 (LP Ⓗ:ON)
QR305 UN2212 (S-VHS Ⓗ:ON)
X801 VSX0162 B or VSX0129
DL802 EFDHR124A13S (2H DELAY LINE)
FL801 VLF0299
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
APC P.C.
ROTARY
SIDE LOCK
AFC DET
PB OUT AMP KILLER SW
VCO
COMB AMP
C.SEPA SENSE
ACC DET
DUBB SENSE
KILLER DET
ACC AMP
BURST UP
BURST DOWN
MAIN B.M.
PB AMP (12dB)
REC OUT AMP KILLER SW
P302 (TO S-VHS)
CLOCK 4.43MHz
0.7Vp-p (REC/P.B)
SECAM Ⓗ
REC CHROMA
ROTARY SW
5.0Vp-p (REC/P.B)
RF CHROMA
0.3Vp-p (P.B)
P.B.C. OUT
0.7Vp-p (P.B)
0.38Vp-p (REC)
EXCEPT REC Ⓗ
(NO CONNECTION)
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B)


IC3601 AN6308
QR3601 DTC144EA (EE Ⓗ:ON)
QR3602 DTC124EA (SWITCHING)
QR3603 DTC124EA (SWITCHING)
QR3604 DTC124EA (SWITCHING)
QR3605 DTC124EA (SWITCHING)
D3601 MA165
D3602 MA165
SUB LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A)

⬅ MAIN SIGNAL PATH IN REC MODE (VHS)

⬅ ■ ■ ■ MAIN SIGNAL PATH IN REC MODE (S-VHS)

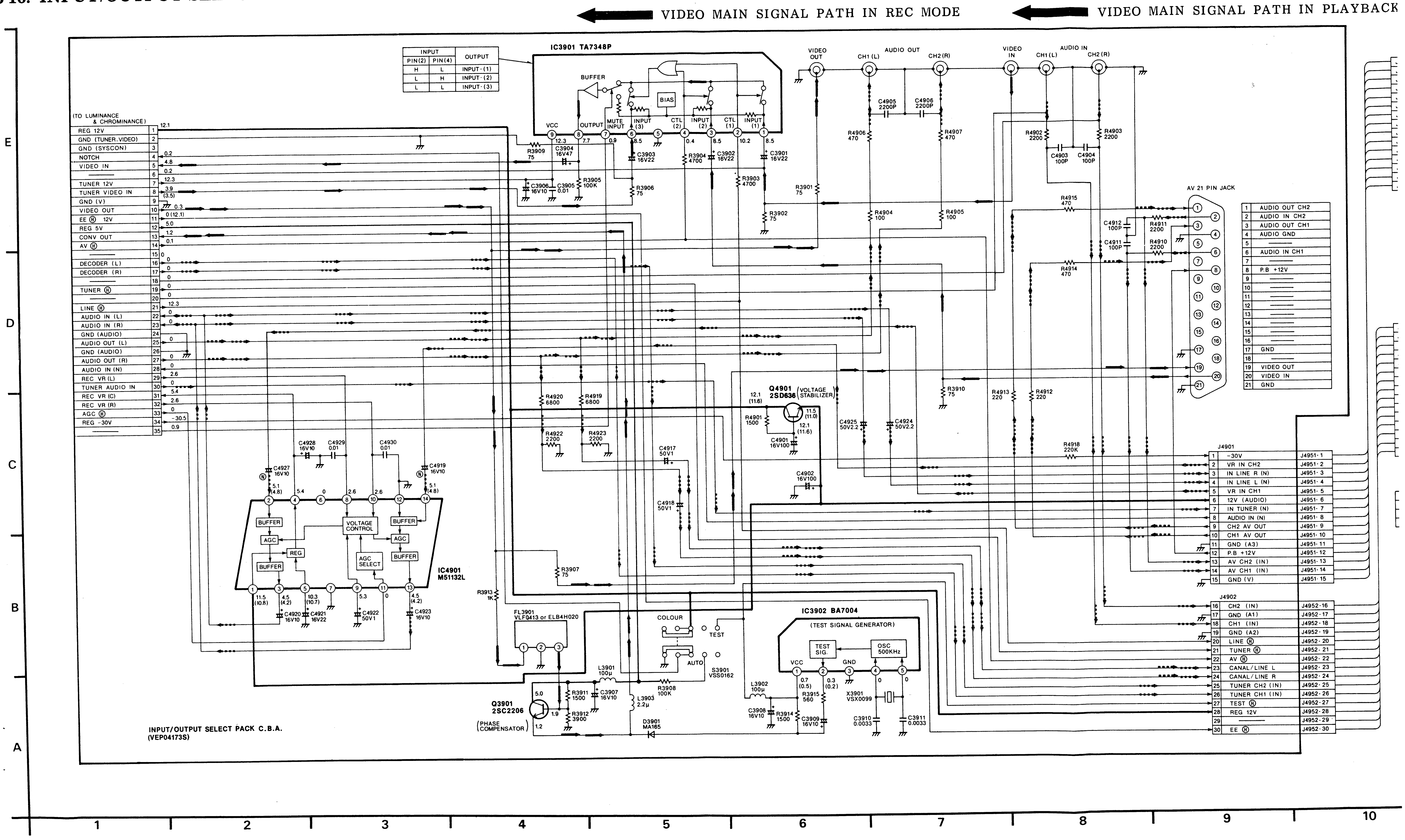
⬅ MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)

⬅ ■ ■ ■ MAIN SIGNAL PATH IN PLAYBACK MODE (S-VHS)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20

3-16. INPUT/OUTPUT SELECT PACK SCHEMATIC DIAGRAM


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK
IC3901 TA7348P
BUFFER
BIAS
VCC
OUTPUT
MUTE INPUT
INPUT (3)
CTL (2)
INPUT (2)
CTL (1)
INPUT (1)
12.3
7.7
0.9
8.5
0.4
8.5
10.2
8.5
R3909 75
C3904 16V47
C3903 16V22
R3904 4700
C3902 16V22
C3901 16V22
C3906 16V10
C3905 0.01
R3905 100K
R3906 75
R3903 4700
R3902 75
R3901 75
VIDEO OUT
AUDIO OUT
CH1 (L)
CH2 (R)
VIDEO IN
AUDIO IN
CH1 (L)
CH2 (R)
C4905 2200P
C4906 2200P
R4906 470
R4907 470
R4902 2200
R4903 2200
C4903 100P
C4904 100P
R4904 100
R4905 100
R4915 470
R4914 470
C4912 100P
C4911 100P
R4911 2200
R4910 2200
AV 21 PIN JACK
R3910 75
R4913 220
R4912 220
R4918 220K
Q4901 2SD636 (VOLTAGE STABILIZER)
12.1 (11.6)
11.5 (11.0)
12.1 (11.6)
R4901 1500
C4901 16V100
C4902 16V100
C4925 50V2.2
C4924 50V2.2
C4917 50V1
C4918 50V1
R4920 6800
R4919 6800
R4922 2200
R4923 2200
C4928 16V10
C4929 0.01
C4930 0.01
C4927 16V10
C4919 16V10
5.1 (4.8)
5.4
0
2.6
2.6
5.1 (4.8)
BUFFER
AGC
BUFFER
REG
VOLTAGE CONTROL
AGC SELECT
BUFFER
AGC
BUFFER
IC4901 M51132L
11.5 (10.8)
4.5 (4.2)
10.3 (10.7)
5.3
0
4.5 (4.2)
C4920 16V10
C4921 16V22
C4922 50V1
C4923 16V10
R3907 75
R3913 1K
FL3901 VLFQ413 or ELB4H020
COLOUR
TEST
AUTO
S3901 VSS0162
L3901 100μ
R3908 100K
L3903 2.2μ
D3901 MA165
Q3901 2SC2206 (PHASE COMPENSATOR)
5.0
1.9
1.2
R3911 1500
C3907 16V10
R3912 3900
IC3902 BA7004
(TEST SIGNAL GENERATOR)
TEST SIG.
OSC 500KHz
VCC
GND
0.7 (0.5)
0.3 (0.2)
0
0
L3902 100μ
R3915 560
X3901 VSX0099
C3908 16V10
R3914 1500
C3909 16V10
C3910 0.0033
C3911 0.0033
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

INPUT		OUTPUT
PIN(2)	PIN(4)	
H	L	INPUT·(1)
L	H	INPUT·(2)
L	L	INPUT·(3)

(TO LUMINANCE & CHROMINANCE)

REG 12V	1	12.1
GND (TUNER, VIDEO)	2	
GND (SYSCON)	3	
NOTCH	4	0.2
VIDEO IN	5	4.8
———	6	0.2
TUNER 12V	7	12.3
TUNER VIDEO IN	8	3.9 (3.5)
GND (V)	9	
VIDEO OUT	10	0.3
EE Ⓗ 12V	11	0 (12.1)
REG 5V	12	5.0
CONV OUT	13	1.2
AV Ⓗ	14	0.1
———	15	0
DECODER (L)	16	0
DECODER (R)	17	0
———	18	0
TUNER Ⓗ	19	0
———	20	0
LINE Ⓗ	21	12.3
AUDIO IN (L)	22	0
AUDIO IN (R)	23	0
GND (AUDIO)	24	
AUDIO OUT (L)	25	0
GND (AUDIO)	26	
AUDIO OUT (R)	27	0
AUDIO IN (N)	28	0
REC VR (L)	29	2.6
TUNER AUDIO IN	30	0
REC VR (C)	31	5.4
REC VR (R)	32	2.6
AGC Ⓗ	33	0
REG -30V	34	-30.5
———	35	0.9

1	AUDIO OUT CH2
2	AUDIO IN CH2
3	AUDIO OUT CH1
4	AUDIO GND
5	———
6	AUDIO IN CH1
7	———
8	P.B +12V
9	———
10	———
11	———
12	———
13	———
14	———
15	———
16	———
17	GND
18	———
19	VIDEO OUT
20	VIDEO IN
21	GND

J4901

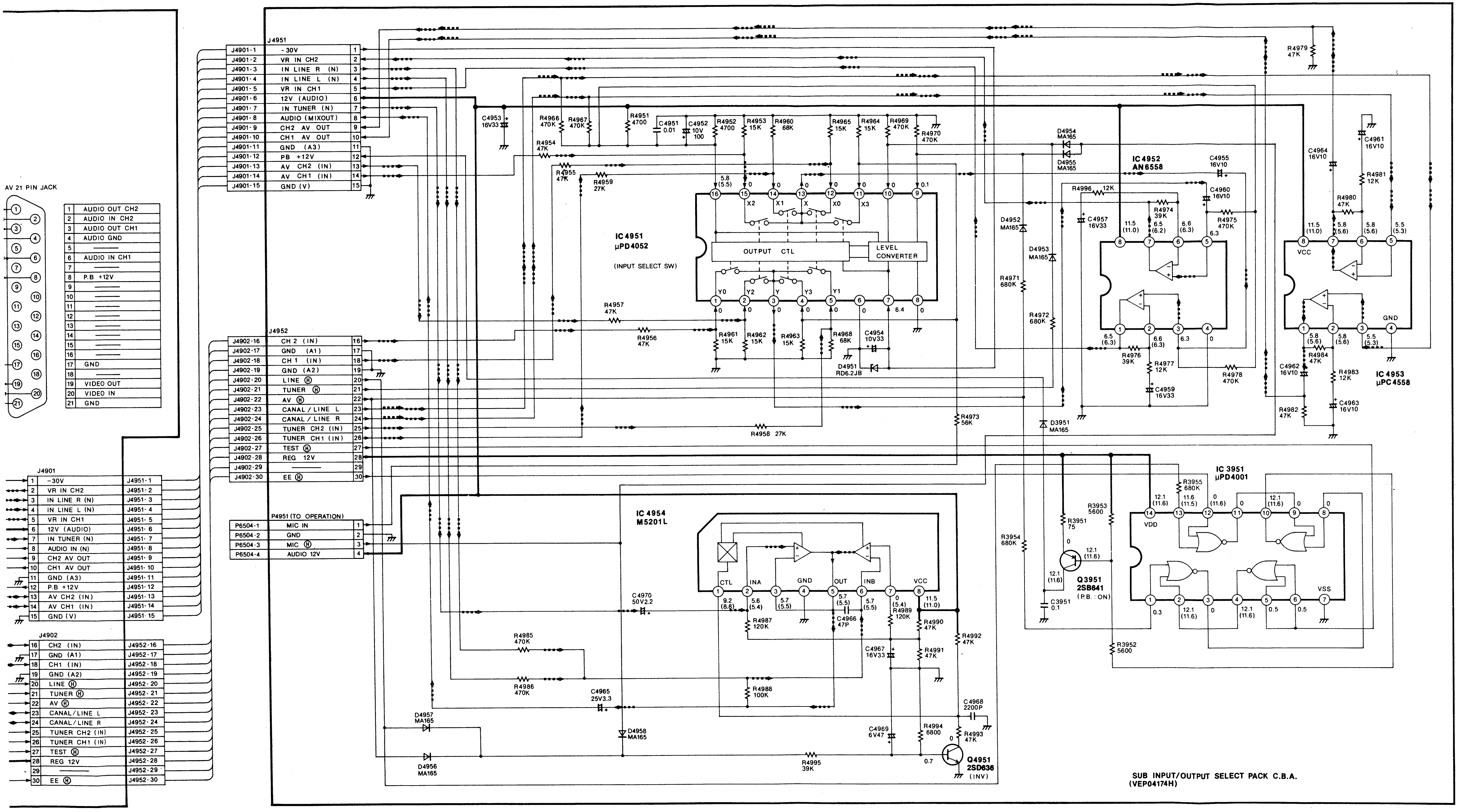
1	-30V	J4951-1
2	VR IN CH2	J4951-2
3	IN LINE R (N)	J4951-3
4	IN LINE L (N)	J4951-4
5	VR IN CH1	J4951-5
6	12V (AUDIO)	J4951-6
7	IN TUNER (N)	J4951-7
8	AUDIO IN (N)	J4951-8
9	CH2 AV OUT	J4951-9
10	CH1 AV OUT	J4951-10
11	GND (A3)	J4951-11
12	P.B +12V	J4951-12
13	AV CH2 (IN)	J4951-13
14	AV CH1 (IN)	J4951-14
15	GND (V)	J4951-15

J4902

16	CH2 (IN)	J4952-16
17	GND (A1)	J4952-17
18	CH1 (IN)	J4952-18
19	GND (A2)	J4952-19
20	LINE Ⓗ	J4952-20
21	TUNER Ⓗ	J4952-21
22	AV Ⓗ	J4952-22
23	CANAL/LINE L	J4952-23
24	CANAL/LINE R	J4952-24
25	TUNER CH2 (IN)	J4952-25
26	TUNER CH1 (IN)	J4952-26
27	TEST Ⓗ	J4952-27
28	REG 12V	J4952-28
29	———	J4952-29
30	EE Ⓗ	J4952-30

Back Page:
LUMINANCE & CHROMINANCE Section

SIGNAL PATH IN PLAYBACK MODE ◀■ ■ ■ AUDIO MAIN SIGNAL PATH IN REC MODE ◀■ ■ ■ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



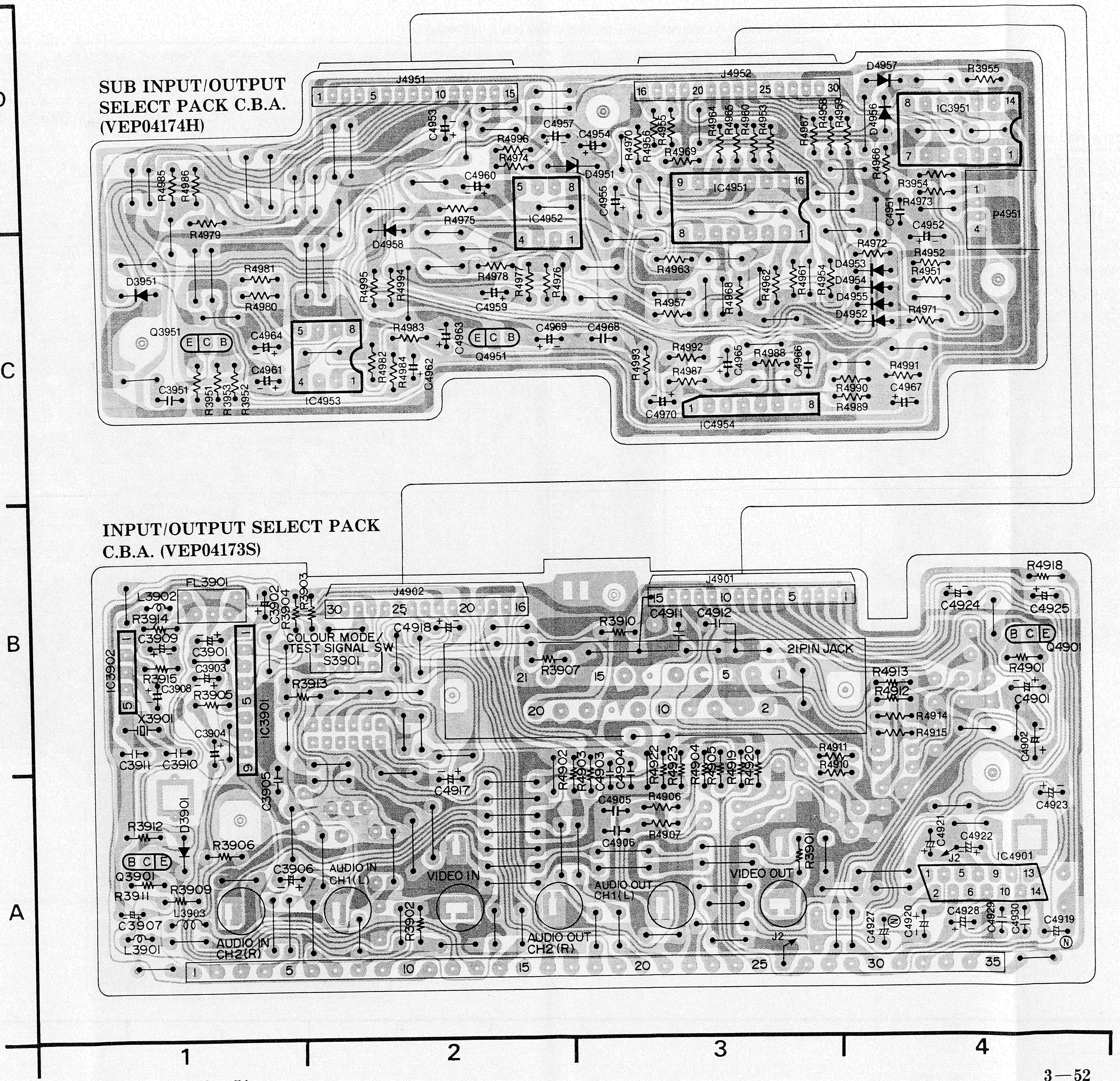
AV 21 PIN JACK
1 AUDIO OUT CH2
2 AUDIO IN CH2
3 AUDIO OUT CH1
4 AUDIO GND
6 AUDIO IN CH1
8 P.B +12V
17 GND
19 VIDEO OUT
20 VIDEO IN
21 GND
J4951
J4901-1 -30V
J4901-2 VR IN CH2
J4901-3 IN LINE R (N)
J4901-4 IN LINE L (N)
J4901-5 VR IN CH1
J4901-6 12V (AUDIO)
J4901-7 IN TUNER (N)
J4901-8 AUDIO (MIXOUT)
J4901-9 CH2 AV OUT
J4901-10 CH1 AV OUT
J4901-11 GND (A3)
J4901-12 PB +12V
J4901-13 AV CH2 (IN)
J4901-14 AV CH1 (IN)
J4901-15 GND (V)
J4952
J4902-16 CH 2 (IN)
J4902-17 GND (A1)
J4902-18 CH 1 (IN)
J4902-19 GND (A2)
J4902-20 LINE Ⓗ
J4902-21 TUNER Ⓗ
J4902-22 AV Ⓗ
J4902-23 CANAL / LINE L
J4902-24 CANAL / LINE R
J4902-25 TUNER CH2 (IN)
J4902-26 TUNER CH1 (IN)
J4902-27 TEST Ⓗ
J4902-28 REG 12V
J4902-29
J4902-30 EE Ⓗ
P4951 (TO OPERATION)
P6504-1 MIC IN
P6504-2 GND
P6504-3 MIC Ⓗ
P6504-4 AUDIO 12V
J4901
J4902
IC4951 μPD4052 (INPUT SELECT SW)
OUTPUT CTL
LEVEL CONVERTER
IC4952 AN6558
IC4953 μPC4558
IC4954 M5201L
CTL INA GND OUT INB VCC
IC3951 μPD4001
VDD VSS
Q3951 2SB641 (P.B. : ON)
Q4951 2SD636 (INV)
D4951 RD6.2JB
D4952 MA165
D4953 MA165
D4954 MA165
D4955 MA165
D4956 MA165
D4957 MA165
D4958 MA165
D3951 MA165
SUB INPUT/OUTPUT SELECT PACK C.B.A. (VEP04174H)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

3-17. INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)

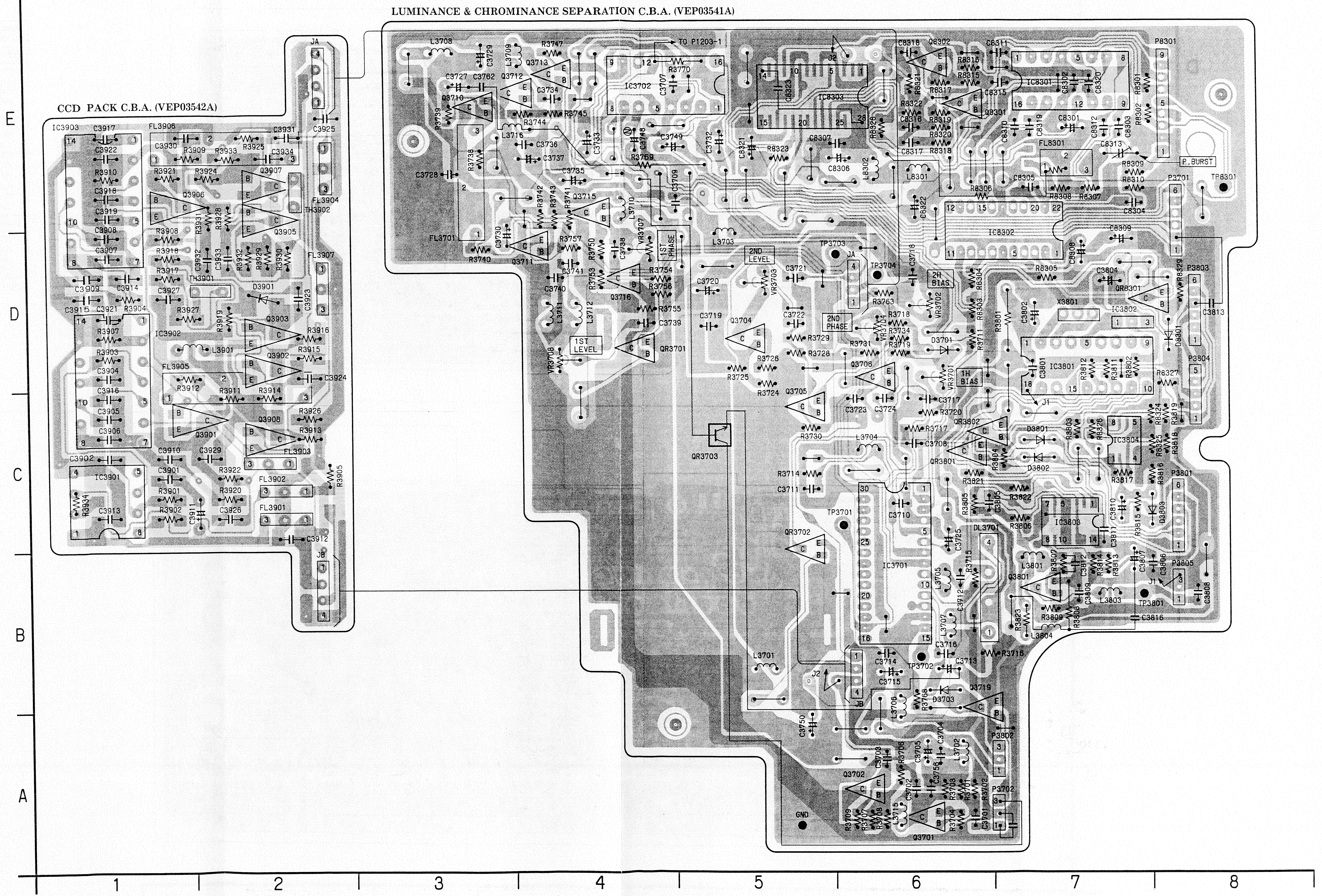

SUB INPUT/OUTPUT SELECT PACK C.B.A. (VEP04174H)
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04173S)
D
C
B
A
1
2
3
4
J4951
J4952
IC3951
IC4951
IC4952
IC4953
IC4954
P4951
Q3951
Q4951
D3951
D4951
D4953
D4954
D4955
D4952
D4956
D4957
D4958
R3955
R3954
R4973
J4901
J4902
IC3901
IC3902
IC4901
Q3901
Q4901
FL3901
L3901
L3902
L3903
X3901
D3901
COLOUR MODE/ TEST SIGNAL SW S3901
21PIN JACK
AUDIO IN CH1(L)
AUDIO IN CH2(R)
VIDEO IN
AUDIO OUT CH1(L)
AUDIO OUT CH2 (R)
VIDEO OUT
J2

INPUT/OUTPUT SELECT PACK C.B.A.

Transistor	
Q3901	A-1
Q3951	C-1
Q4901	B-4
Q4951	C-2
Integrated Circuit	
IC3901	B-1
IC3902	B-1
IC3951	D-4
IC4901	A-4
IC4951	D-3
IC4952	D-2
IC4953	C-2
IC4954	C-3
Connector	
J4901	B-3
J4902	B-2
J4951	D-2
J4952	D-3

ADDRESS INFORMATION

3-18. LUMINANCE & CHROMINANCE SEPARATION C.B.A. (VEP03541A)


LUMINANCE & CHROMINANCE SEPARATION C.B.A. (VEP03541A)
CCD PACK C.B.A. (VEP03542A)
TO P1203-1
P.BURST
1ST PHASE
1ST LEVEL
2ND LEVEL
2ND PHASE
2H BIAS
1H BIAS
GND
IC3901
IC3902
IC3903
IC3701
IC3702
IC3801
IC3802
IC3803
IC3804
IC8301
IC8302
IC8303
JA
JB
J1
J2
E
D
C
B
A
1
2
3
4
5
6
7
8

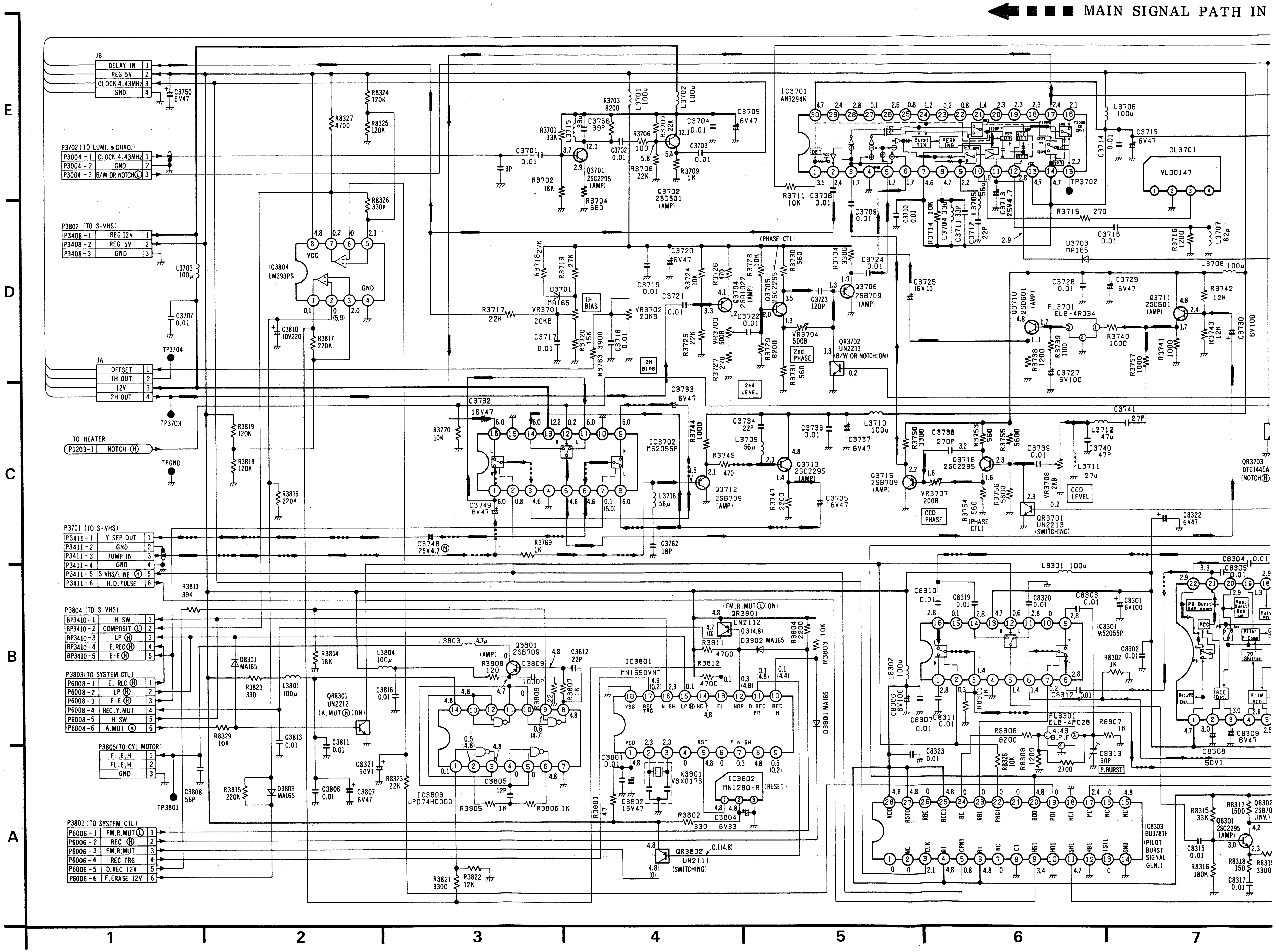
Back Page:
INPUT/OUTPUT SELECT Section

3-19. LUMINANCE & CHROMINANCE SEPARATION SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN
MAIN SIGNAL PATH IN

LUMINANCE & CHROMINANCE SEPARATION C.B.A.	
Transistor	
Q3701	A-6
Q3702	A-6
Q3704	D-5
Q3705	C-5
Q3706	D-6
Q3710	E-3
Q3711	D-4
Q3712	E-3
Q3713	E-4
Q3715	E-4
Q3716	D-4
Q3719	B-6
Q3801	B-7
Q3901	C-2
Q3902	D-2
Q3903	D-2
Q3905	E-2
Q3906	E-2
Q3907	E-2
Q3908	C-2
Q8301	E-7
Q8302	E-6
Transistor & Resistor	
QR3701	D-4
QR3702	C-5
QR3703	C-5
QR3801	C-6
QR3802	C-6
QR8301	D-7
Integrated Circuit	
IC3701	B-6
IC3702	E-4
IC3801	D-7
IC3802	D-7
IC3803	C-7
IC3804	C-7
IC3901	C-1
IC3902	D-1
IC3903	E-1
IC8301	E-7
IC8302	D-7
IC8303	E-6
Test Point	
TP3701	C-6
TP3702	B-6
TP3703	D-6
TP3704	D-6
TP3801	B-7
TP8301	E-8
TP GND	A-5
Adjustment	
VR3701	D-6
VR3702	D-6
VR3703	D-5
VR3704	D-6
VR3707	D-4
VR3708	D-4
C8313	E-7
Connector	
P3701	E-8
P3702	A-7
P3801	C-8
P3802	A-7
P3803	D-8
P3804	D-8
P3805	B-8
P8301	E-8

ADDRESS INFORMATION



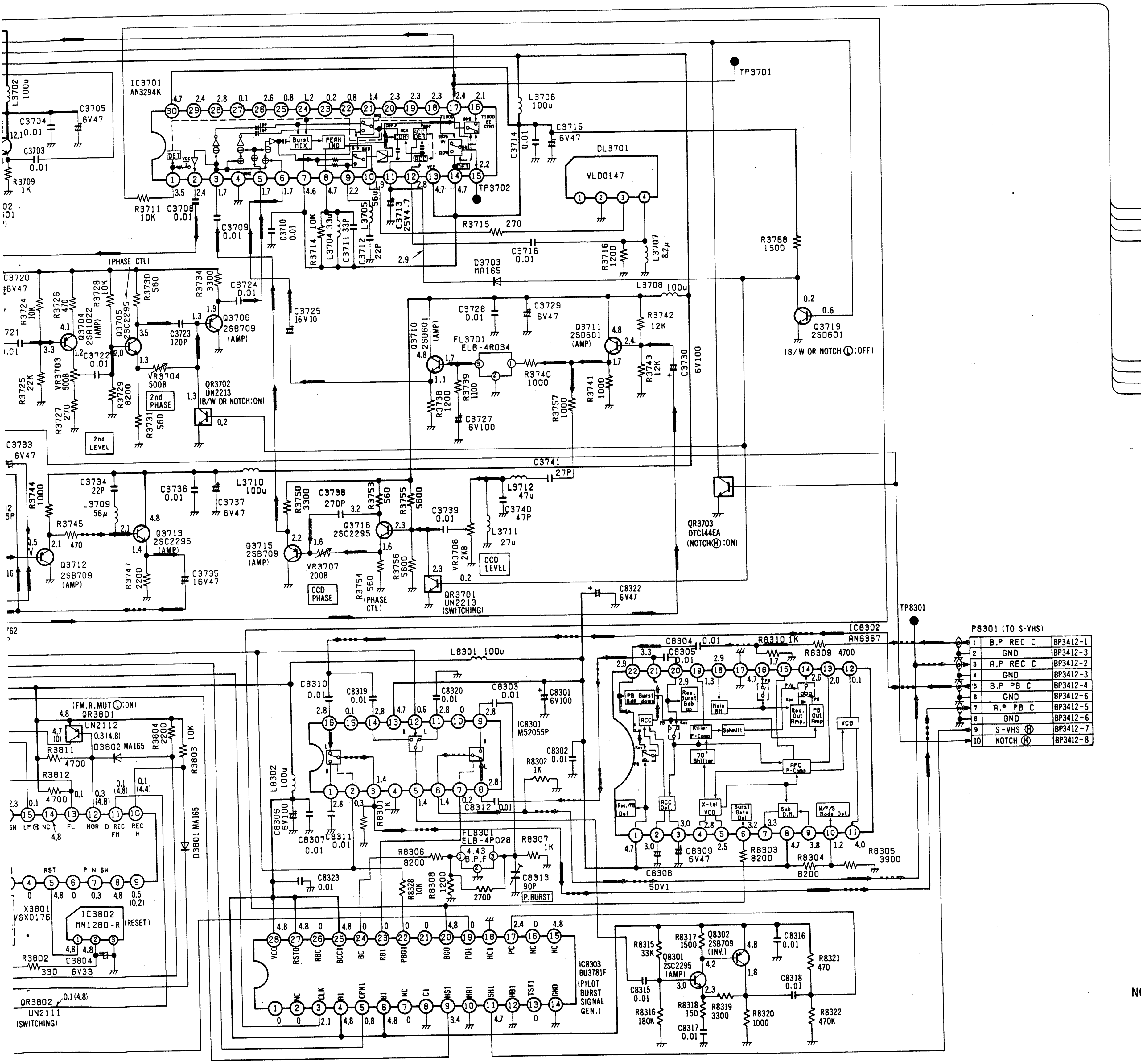
E
D
C
B
A
1
2
3
4
5
6
7
JB
DELAY IN
REG 5V
CLOCK 4.43MHz
GND
P3702 (TO LUMI. & CHRO.)
P3004-1 CLOCK 4.43MHz
P3004-2 GND
P3004-3 B/W OR NOTCH Ⓛ
P3802 (TO S-VHS)
P3408-1 REG 12V
P3408-2 REG 5V
P3408-3 GND
IC3804 LM393PS
JA
OFFSET
1H OUT
12V
2H OUT
TO HEATER
P1203-1 NOTCH Ⓗ
TP3704
TP3703
TPGND
P3701 (TO S-VHS)
P3411-1 Y SEP OUT
P3411-2 GND
P3411-3 JUMP IN
P3411-4 GND
P3411-5 S-VHS/LINE Ⓗ
P3411-6 H.D.PULSE
P3804 (TO S-VHS)
BP3410-1 H SW
BP3410-2 COMPOSIT Ⓛ
BP3410-3 LP Ⓗ
BP3410-4 E.REC Ⓗ
BP3410-5 E-E Ⓗ
P3803 (TO SYSTEM CTL)
P6008-1 E.REC Ⓗ
P6008-2 LP Ⓗ
P6008-3 E-E Ⓗ
P6008-4 REC.Y.MUT
P6008-5 H SW
P6008-6 A.MUT Ⓗ
P3805 (TO CYL MOTOR)
FL.E.H
FL.E.H
GND
TP3801
P3801 (TO SYSTEM CTL)
P6006-1 FM.R.MUT Ⓛ
P6006-2 REC Ⓗ
P6006-3 FM.R.MUT
P6006-4 REC TRG
P6006-5 D.REC 12V
P6006-6 F.ERASE 12V
QR8301 UN2212 (A.MUT Ⓗ:ON)
IC3803 uPD74HC00G
Q3801 2SB709 (AMP)
IC3801 MN1550VNT
X3801 VSX0176
IC3802 MN1280-R (RESET)
QR3801 UN2112 (FM.R.MUT Ⓛ:ON)
D3802 MA165
D3801 MA165
QR3802 UN2111 (SWITCHING)
Q3701 2SC2295 (AMP)
Q3702 2SD601 (AMP)
IC3701 AN3294K
L3706 100u
DL3701 VLD0147
TP3702
D3703 MA165
IC3702 M52055P
Q3704 2SA1022 (AMP)
Q3705 2SC2295 (AMP)
Q3706 2SB709 (AMP)
QR3702 UN2213 (B/W OR NOTCH:ON)
(PHASE CTL)
1H BIAS
2H BIAS
2nd PHASE
2nd LEVEL
Q3710 2SD601 (AMP)
Q3711 2SD601 (AMP)
FL3701 ELB-4R034
Q3712 2SB709 (AMP)
Q3713 2SC2295 (AMP)
Q3715 2SB709 (AMP)
Q3716 2SC2295
CCD PHASE
CCD LEVEL
QR3701 UN2213 (SWITCHING)
QR3703 DTC144EA (NOTCH Ⓗ)
IC8301 M52055P
FL8301 ELB-4P028
IC8303 BU3781F (PILOT BURST SIGNAL GEN.)
Q8301 2SC2295 (AMP)

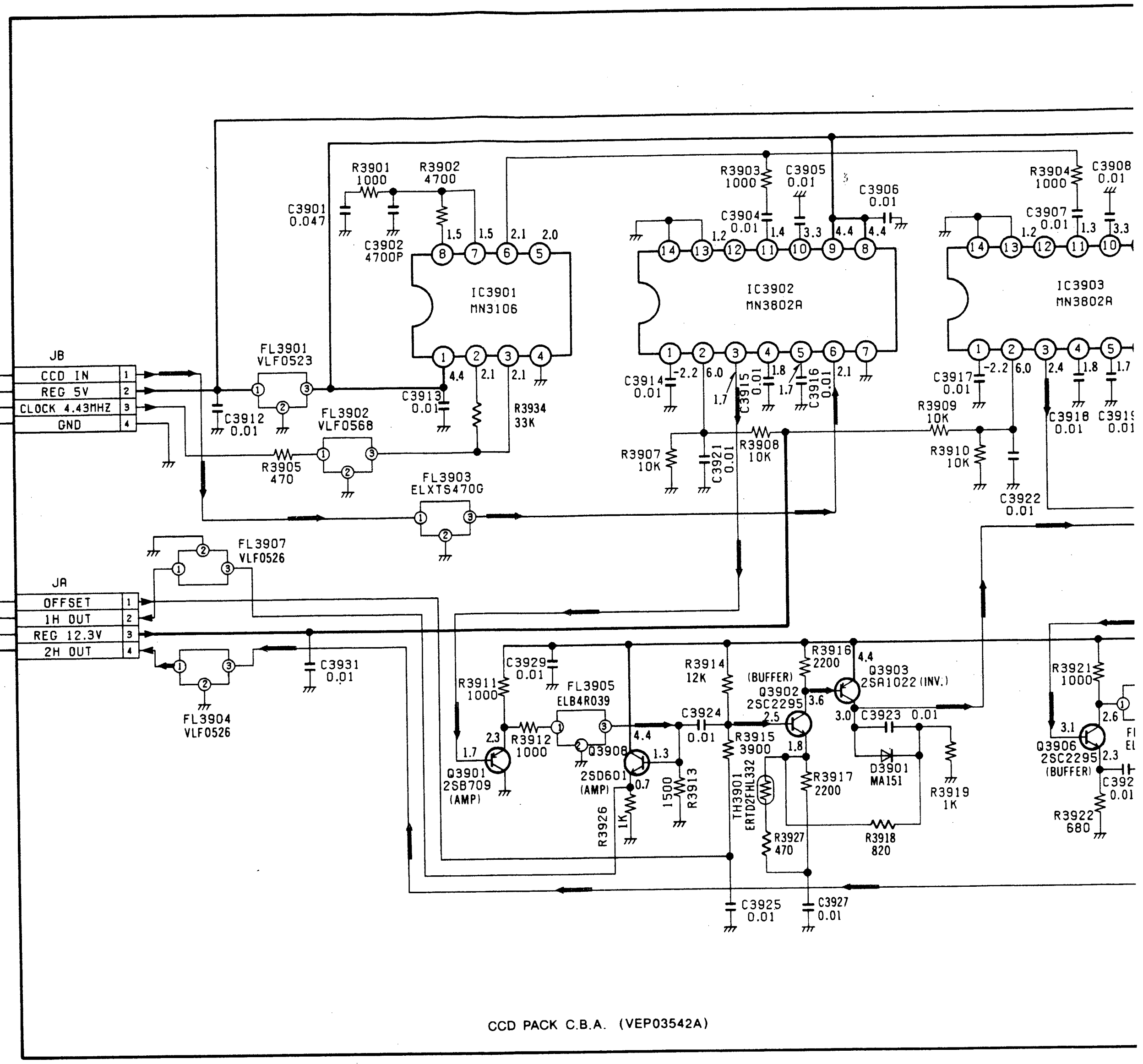
GRAM

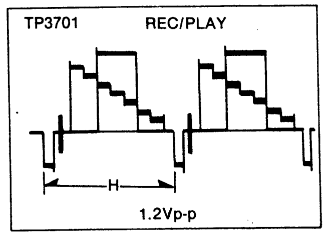
MAIN SIGNAL PATH IN REC MODE (VHS)
MAIN SIGNAL PATH IN REC MODE (S-VHS)

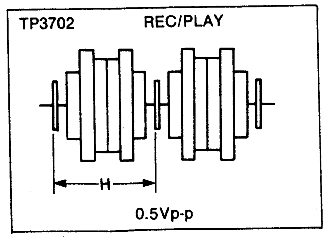
MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)

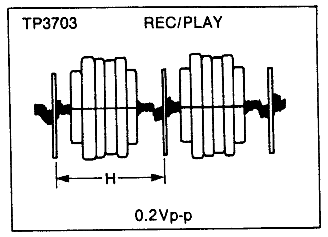
MAIN SIGNAL PATH IN PLA


IC3701 AN3294K
TP3701
TP3702
DL3701 VLD0147
L3706 100u
C3715 6V47
R3715 270
C3716 0.01
R3716 1200
L3707 8.2μ
D3703 MA165
R3768 1500
L3708 100u
Q3719 2SD601 (B/W OR NOTCH Ⓛ:OFF)
Q3706 2SB709 (AMP)
Q3705 2SC2295
Q3704 2SA1022 (AMP)
VR3704 500B
2nd PHASE
2nd LEVEL
QR3702 UN2213 (B/W OR NOTCH:ON)
FL3701 ELB-4R034
Q3710 2SD601 (AMP)
Q3711 2SD601 (AMP)
C3730 6V100
C3741 27P
L3712 47u
C3740 47P
L3711 27u
CCD LEVEL
Q3712 2SB709 (AMP)
Q3713 2SC2295 (AMP)
Q3715 2SB709 (AMP)
Q3716 2SC2295
VR3707 200B
CCD PHASE
VR3708 2K8
QR3701 UN2213 (SWITCHING)
QR3703 DTC144EA (NOTCHⒽ:ON)
C8322 6V47
TP8301
(PHASE CTL)
IC8302 AN6367
IC8301 M52055P
L8301 100u
FL8301 ELB-4P028
4.43 B.P.F
P.BURST
IC8303 BU3781F (PILOT BURST SIGNAL GEN.)
Q8301 2SC2295 (AMP)
Q8302 2SB709 (INV.)
(FM.R.MUT Ⓛ:ON)
QR3801 UN2112
D3802 MA165
D3801 MA165
IC3802 MN1280-R (RESET)
X3801 VSX0176
QR3802 UN2111 (SWITCHING)
P8301 (TO S-VHS)
1 B.P REC C BP3412-1
2 GND BP3412-3
3 A.P REC C BP3412-2
4 GND BP3412-3
5 B.P PB C BP3412-4
6 GND BP3412-6
7 A.P PB C BP3412-5
8 GND BP3412-6
9 S-VHS Ⓗ BP3412-7
10 NOTCH Ⓗ BP3412-8


JB
CCD IN 1
REG 5V 2
CLOCK 4.43MHZ 3
GND 4
JA
OFFSET 1
1H OUT 2
REG 12.3V 3
2H OUT 4
IC3901 MN3106
IC3902 MN3802A
IC3903 MN3802A
FL3901 VLF0523
FL3902 VLF0568
FL3903 ELXTS470G
FL3904 VLF0526
FL3905 ELB4R039
FL3907 VLF0526
Q3901 2SB709 (AMP)
Q3902 2SC2295 (BUFFER)
Q3903 2SA1022 (INV.)
Q3906 2SC2295 (BUFFER)
Q3908 2SD601 (AMP)
D3901 MA151
TH3901 ERTD2FHL332
CCD PACK C.B.A. (VEP03542A)



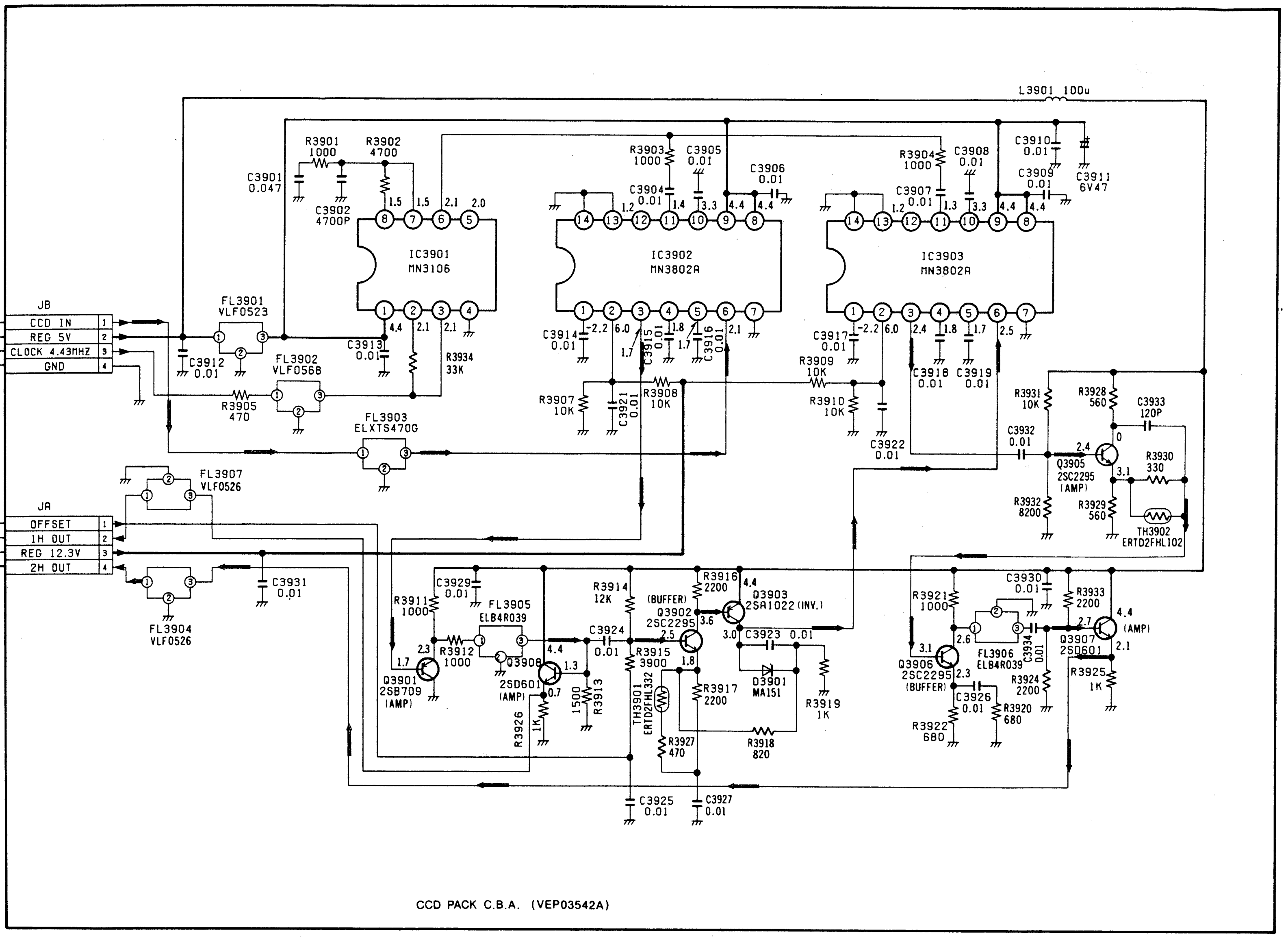


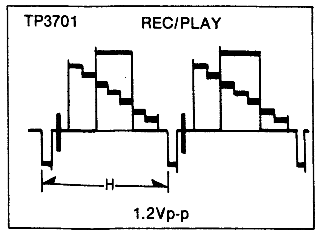


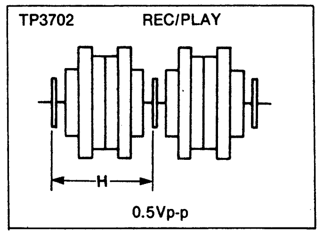
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

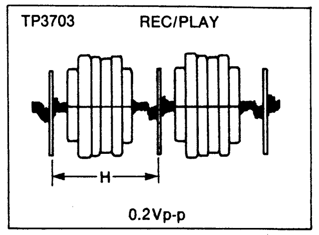
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACK
WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

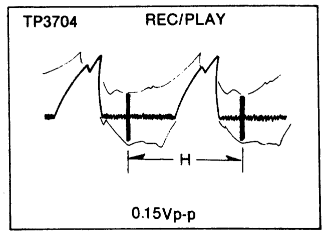
5 6 7 8 9 10 11 12


L3901 100u
R3901 1000
R3902 4700
C3901 0.047
C3902 4700P
IC3901 MN3106
R3903 1000
C3905 0.01
C3904 0.01
C3906 0.01
IC3902 MN3802A
R3904 1000
C3908 0.01
C3907 0.01
C3910 0.01
C3909 0.01
C3911 6V47
IC3903 MN3802A
JB
CCD IN
REG 5V
CLOCK 4.43MHZ
GND
FL3901 VLF0523
C3912 0.01
FL3902 VLF0568
C3913 0.01
R3934 33K
R3905 470
FL3903 ELXTS470G
C3914 0.01
C3915 0.01
C3916 0.01
R3907 10K
C3921 0.01
R3908 10K
C3917 0.01
R3909 10K
R3910 10K
C3918 0.01
C3919 0.01
C3922 0.01
R3931 10K
R3928 560
C3933 120P
C3932 0.01
Q3905 2SC2295 (AMP)
R3930 330
R3932 8200
R3929 560
TH3902 ERTD2FHL102
FL3907 VLF0526
JA
OFFSET
1H OUT
REG 12.3V
2H OUT
C3931 0.01
FL3904 VLF0526
C3929 0.01
R3911 1000
FL3905 ELB4R039
R3912 1000
Q3901 2SB709 (AMP)
Q3908 2SD601 (AMP)
R3926 1K
1500
R3913
R3914 12K
C3924 0.01
R3915 3900
TH3901 ERTD2FHL332
R3927 470
(BUFFER) Q3902 2SC2295
R3916 2200
Q3903 2SA1022 (INV.)
C3923 0.01
D3901 MA151
R3917 2200
R3918 820
R3919 1K
C3925 0.01
C3927 0.01
C3930 0.01
R3921 1000
R3933 2200
Q3906 2SC2295 (BUFFER)
FL3906 ELB4R039
C3934 0.01
Q3907 2SD601 (AMP)
R3925 1K
C3926 0.01
R3924 2200
R3920 680
R3922 680
CCD PACK C.B.A. (VEP03542A)







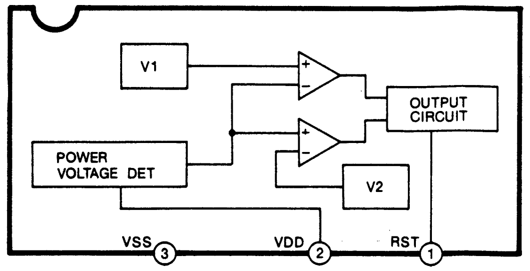


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

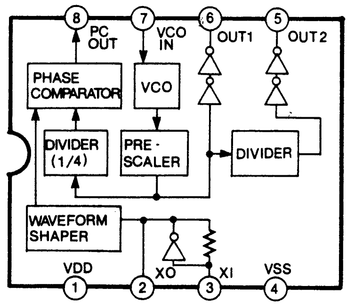
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

IC BLOCK

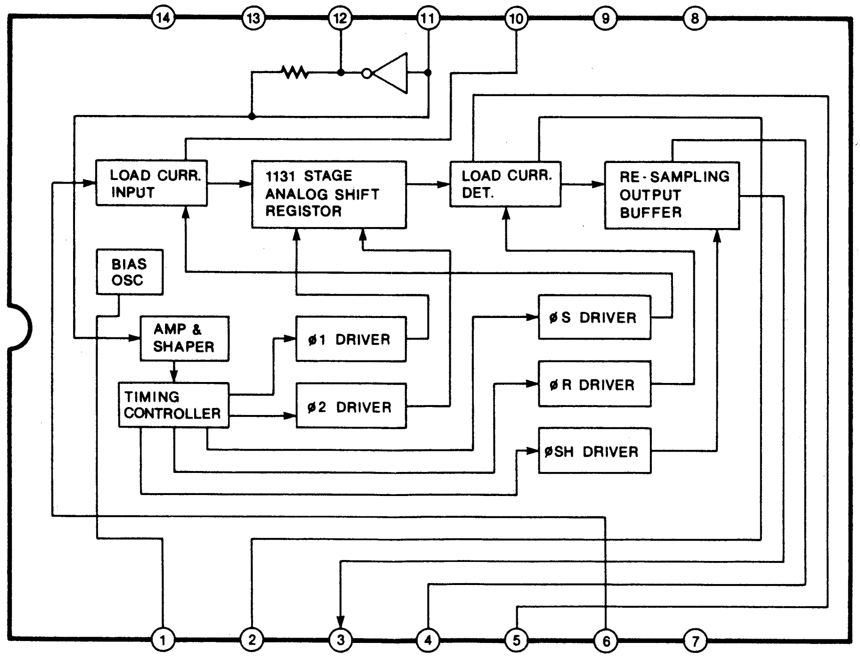
IC3802 (MN1280R)


V1
POWER VOLTAGE DET
OUTPUT CIRCUIT
V2
VSS 3
VDD 2
RST 1

IC3901 (MN3106)


8 PC OUT
7 VCO IN
6 OUT1
5 OUT2
PHASE COMPARATOR
VCO
DIVIDER (1/4)
PRE-SCALER
DIVIDER
WAVEFORM SHAPER
VDD 1
2 XO
3 XI
VSS 4

IC3902, IC3903 (MN3802A)


14
13
12
11
10
9
8
LOAD CURR. INPUT
1131 STAGE ANALOG SHIFT REGISTOR
LOAD CURR. DET.
RE-SAMPLING OUTPUT BUFFER
BIAS OSC
AMP & SHAPER
TIMING CONTROLLER
ø1 DRIVER
ø2 DRIVER
øS DRIVER
øR DRIVER
øSH DRIVER
1
2
3
4
5
6
7

Next Page:
S-VHS Section

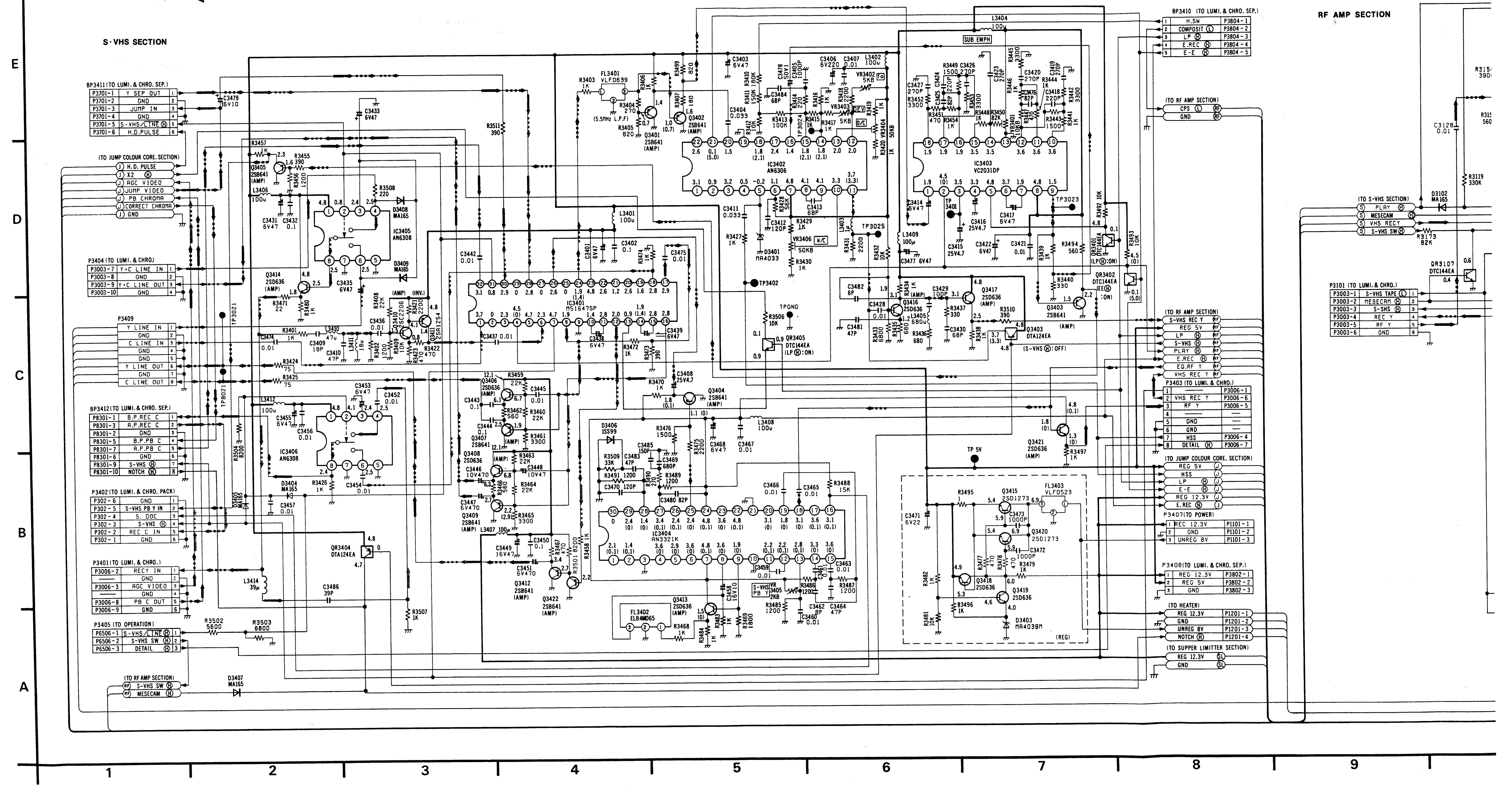
3-20. S-VHS SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE (VHS)

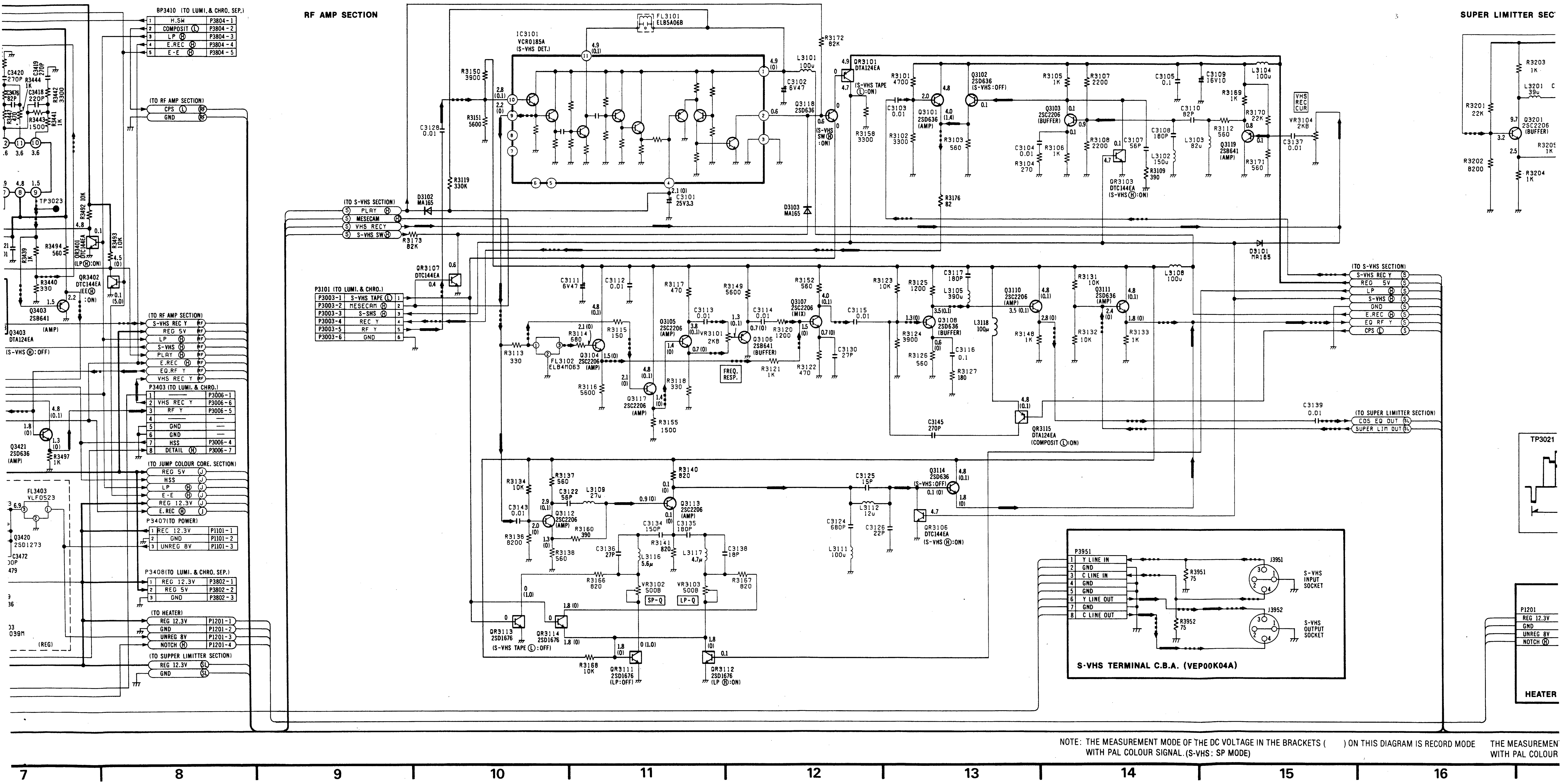
MAIN SIGNAL PATH IN REC MODE (S-VHS)

MAIN SIGNAL PATH IN PLAYBACK MODE (VHS)

MAIN SIGNAL PATH IN PLAYBACK MODE (S-VHS)

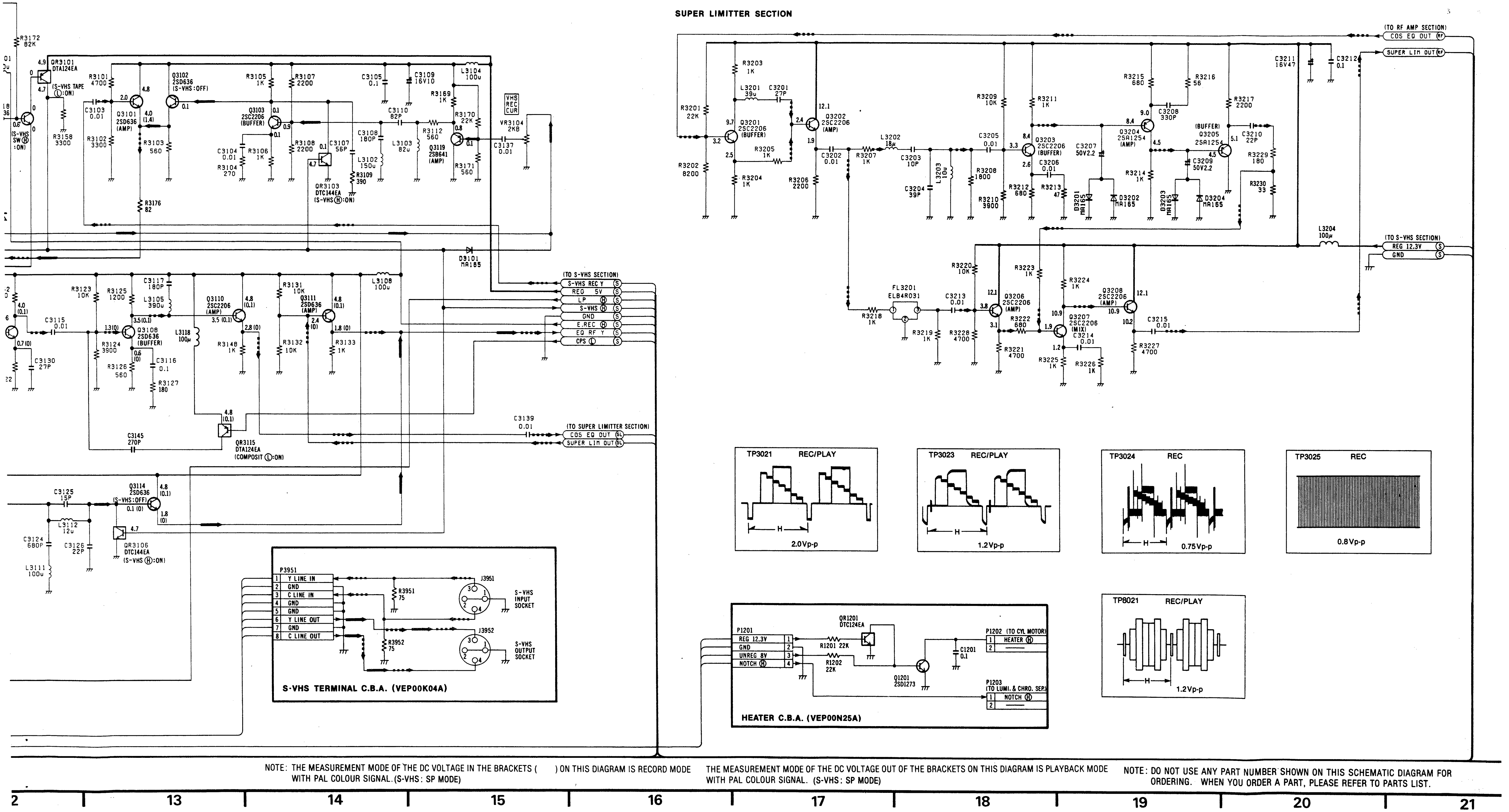

S-VHS SECTION
RF AMP SECTION
E
D
C
B
A
1
2
3
4
5
6
7
8
9
BP3411 (TO LUMI. & CHRO. SEP.)
P3701-1 Y SEP OUT
P3701-2 GND
P3701-3 JUMP IN
P3701-4 GND
P3701-5 S-VHS/LINE Ⓗ
P3701-6 H.D.PULSE
(TO JUMP COLOUR CORE. SECTION)
H.D. PULSE
X2 Ⓗ
AGC VIDEO
JUMP VIDEO
PB CHROMA
CORRECT CHROMA
GND
P3404 (TO LUMI. & CHRO.)
P3003-7 Y·C LINE IN
P3003-8 GND
P3003-9 Y·C LINE OUT
P3003-10 GND
P3409
Y LINE IN
GND
C LINE IN
GND
GND
Y LINE OUT
GND
C LINE OUT
BP3412 (TO LUMI. & CHRO. SEP.)
P8301-1 B.P.REC C
P8301-3 R.P.REC C
P8301-2 GND
P8301-5 B.P.PB C
P8301-7 R.P.PB C
P8301-6 GND
P8301-9 S-VHS Ⓗ
P8301-10 NOTCH Ⓗ
P3402 (TO LUMI. & CHRO. PACK)
P302-6 GND
P302-5 S-VHS PB Y IN
P302-4 S. DOC
P302-3 S-VHS Ⓗ
P302-2 REC C IN
P302-1 GND
P3401 (TO LUMI. & CHRO.)
P3006-2 RECY IN
GND
P3006-3 AGC VIDEO
GND
P3006-8 PB C OUT
P3006-9 GND
P3405 (TO OPERATION)
P6506-1 S-VHS/LINE Ⓗ
P6506-2 S-VHS SW Ⓗ
P6506-3 DETAIL Ⓗ
(TO RF AMP SECTION)
S-VHS SW Ⓗ
MESECAM Ⓗ
IC3405 AN6308
IC3406 AN6308
IC3401 M51647SP
IC3402 AN6306
IC3403 VC2031DP
IC3404 AN3321K
FL3401 VLF0639
(5.5MHz L.P.F)
FL3402 ELB4M065
FL3403 VLF0523
SUB EMPH
BP3410 (TO LUMI. & CHRO. SEP.)
H.SW P3804-1
COMPOSIT Ⓛ P3804-2
LP Ⓗ P3804-3
E.REC Ⓗ P3804-4
E-E Ⓗ P3804-5
(TO RF AMP SECTION)
CPS Ⓛ
GND
(TO RF AMP SECTION)
S-VHS REC Y
REG 5V
LP Ⓗ
S-VHS Ⓗ
PLAY Ⓗ
E.REC Ⓗ
EQ.RF Y
VHS REC Y
P3403 (TO LUMI. & CHRO.)
VHS REC Y P3006-1
RF Y P3006-6
GND P3006-5
HSS P3006-4
DETAIL Ⓗ P3006-7
(TO JUMP COLOUR CORE. SECTION)
REG 5V
HSS
LP Ⓗ
E-E Ⓗ
REG 12.3V
E.REC Ⓗ
P3407 (TO POWER)
REC 12.3V P1101-1
GND P1101-2
UNREG 8V P1101-3
P3408 (TO LUMI. & CHRO. SEP.)
REG 12.3V P3802-1
REG 5V P3802-2
GND P3802-3
(TO HEATER)
REG 12.3V P1201-1
GND P1201-2
UNREG 8V P1201-3
NOTCH Ⓗ P1201-4
(TO SUPPER LIMITTER SECTION)
REG 12.3V
GND
(TO S-VHS SECTION)
PLAY Ⓗ
MESECAM Ⓗ
VHS RECY
S-VHS SWⒽ
P3101 (TO LUMI. & CHRO.)
P3003-1 S-VHS TAPE Ⓛ
P3003-2 MESECAM Ⓗ
P3003-3 S-SHS Ⓗ
P3003-4 REC Y
P3003-5 RF Y
P3003-6 GND
TP5V
TPGND
TP3402
TP3023
TP3025
QR3404 DTA124EA
QR3405 DTC144EA (LP Ⓗ:ON)
QR3402 DTC144EA
QR3403 DTA124EA (S-VHS Ⓗ:OFF)
QR3107 DTC144EA
Q3401 2SB641 (AMP)
Q3402 2SB641 (AMP)
Q3404 2SB641 (AMP)
Q3405 2SB641 (AMP)
Q3406 2SD636 (AMP)
Q3407 2SB641
Q3408 2SD636
Q3409 2SB641 (AMP)
Q3412 2SB641 (AMP)
Q3413 2SD636 (AMP)
Q3414 2SD636 (AMP)
Q3415 2SD1273
Q3416 2SD636
Q3417 2SD636 (AMP)
Q3418 2SD636
Q3419 2SD636
Q3420 2SD1273
Q3421 2SD636 (AMP)
Q3422 2SB641 (AMP)
Q3403 2SB641
Q3410 2SC2206
Q3411 2SA1254
D3401 MA4033
D3403 MA4039M
D3404 MA165
D3405 MA165
D3406 1SS99
D3407 MA165
D3408 MA165
D3409 MA165
D3102 MA165
(REG)

ACK MODE (VHS)
ACK MODE (S-VHS)


RF AMP SECTION
SUPER LIMITTER SEC
IC3101 VCR0185A (S-VHS DET.)
FL3101 ELB5A06B
QR3101 DTA124EA
Q3101 2SD636 (AMP)
Q3102 2SD636 (S-VHS:OFF)
Q3103 2SC2206 (BUFFER)
Q3119 2SB641 (AMP)
Q3105 2SC2206 (AMP)
Q3106 2SB641 (BUFFER)
Q3107 2SC2206 (MIX)
Q3108 2SD636 (BUFFER)
Q3110 2SC2206 (AMP)
Q3111 2SD636 (AMP)
Q3112 2SC2206 (AMP)
Q3113 2SC2206 (AMP)
Q3114 2SD636 (S-VHS:OFF)
Q3117 2SC2206 (AMP)
QR3115 DTA124EA (COMPOSIT Ⓛ:ON)
QR3106 DTC144EA (S-VHS Ⓗ:ON)
QR3111 2SD1676 (LP:OFF)
QR3112 2SD1676 (LP Ⓗ:ON)
QR3113 2SD1676 (S-VHS TAPE Ⓛ:OFF)
VR3102 500B SP-Q
VR3103 500B LP-Q
FREQ. RESP.
VHS REC CUR
P3101 (TO LUMI. & CHRO.)
(TO S-VHS SECTION)
(TO SUPER LIMITTER SECTION)
COS EQ OUT
SUPER LIM OUT
P3951
Y LINE IN
C LINE IN
Y LINE OUT
C LINE OUT
J3951 S-VHS INPUT SOCKET
J3952 S-VHS OUTPUT SOCKET
S-VHS TERMINAL C.B.A. (VEP00K04A)
P1201
REG 12.3V
GND
UNREG 8V
NOTCH Ⓗ
HEATER
TP3021
7
8
9
10
11
12
13
14
15
16

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(S-VHS: SP MODE)

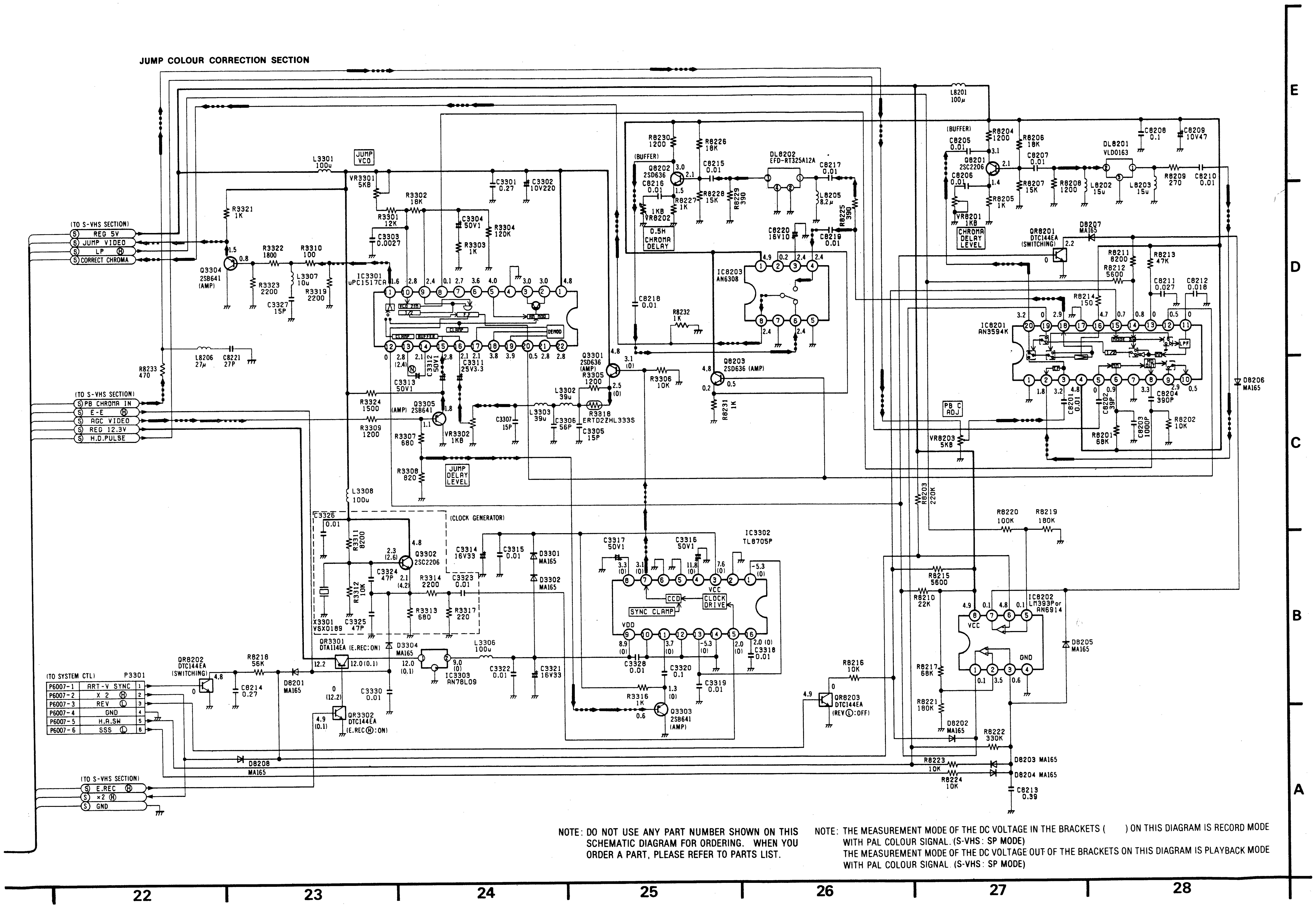
THE MEASUREMEN
WITH PAL COLOUR


SUPER LIMITTER SECTION
(TO RF AMP SECTION)
COS EQ OUT
SUPER LIM OUT
(TO S-VHS SECTION)
REG 12.3V
GND
S-VHS REC Y
REG 5V
LP
S-VHS Ⓗ
GND
E.REC Ⓗ
EQ RF Y
CPS Ⓛ
(TO SUPER LIMITTER SECTION)
COS EQ OUT
SUPER LIM OUT
QR3101 DTA124EA
(S-VHS TAPE Ⓛ:ON)
Q3101 2SD636 (AMP)
Q3102 2SD636 (S-VHS:OFF)
Q3103 2SC2206 (BUFFER)
QR3103 DTC144EA (S-VHS Ⓗ:ON)
Q3119 2SB641 (AMP)
VHS REC CUR
VR3104 2KB
D3101 MA165
Q3108 2SD636 (BUFFER)
Q3110 2SC2206 (AMP)
Q3111 2SD636 (AMP)
QR3115 DTA124EA (COMPOSIT Ⓛ:ON)
Q3114 2SD636 (S-VHS:OFF)
QR3106 DTC144EA (S-VHS Ⓗ:ON)
Q3201 2SC2206 (BUFFER)
Q3202 2SC2206 (AMP)
Q3203 2SC2206 (BUFFER)
Q3204 2SA1254 (AMP)
Q3205 2SA1254 (BUFFER)
Q3206 2SC2206 (AMP)
Q3207 2SC2206 (MIX)
Q3208 2SC2206 (AMP)
FL3201 ELB4R031
D3201 MA165
D3202 MA165
D3203 MA165
D3204 MA165
L3204 100μ
P3951
1 Y LINE IN
2 GND
3 C LINE IN
4 GND
5 GND
6 Y LINE OUT
7 GND
8 C LINE OUT
J3951
S-VHS INPUT SOCKET
J3952
S-VHS OUTPUT SOCKET
S-VHS TERMINAL C.B.A. (VEP00K04A)
P1201
1 REG 12.3V
2 GND
3 UNREG 8V
4 NOTCH Ⓗ
QR1201 DTC124EA
Q1201 2SD1273
P1202 (TO CYL MOTOR)
1 HEATER Ⓗ
P1203 (TO LUMI. & CHRO. SEP.)
1 NOTCH Ⓗ
HEATER C.B.A. (VEP00N25A)
TP3021 REC/PLAY
2.0Vp-p
TP3023 REC/PLAY
1.2Vp-p
TP3024 REC
0.75Vp-p
TP3025 REC
0.8Vp-p
TP8021 REC/PLAY
1.2Vp-p
H
2
13
14
15
16
17
18
19
20
21

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

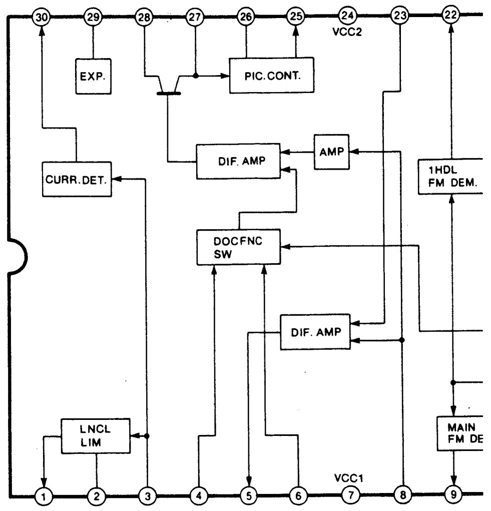

JUMP COLOUR CORRECTION SECTION
(TO S-VHS SECTION)
REG 5V
JUMP VIDEO
LP Ⓗ
CORRECT CHROMA
(TO S-VHS SECTION)
PB CHROMA IN
E-E Ⓗ
AGC VIDEO
REG 12.3V
H.D.PULSE
(TO SYSTEM CTL) P3301
P6007-1 ART-V SYNC
P6007-2 ×2 Ⓗ
P6007-3 REV Ⓛ
P6007-4 GND
P6007-5 H.R.SW
P6007-6 SSS Ⓛ
(TO S-VHS SECTION)
E.REC Ⓗ
×2 Ⓗ
GND
IC3301 uPC1517CA
IC3302 TL8705P
IC3303 AN78L09
IC8201 AN3594K
IC8202 LM393P or AN6914
IC8203 AN6308
Q3301 2SD636 (AMP)
Q3302 2SC2206
Q3303 2SB641 (AMP)
Q3304 2SB641 (AMP)
Q3305 2SB641 (AMP)
Q8201 2SC2206
Q8202 2SD636 (BUFFER)
Q8203 2SD636 (AMP)
QR3301 DTA114EA (E.REC:ON)
QR3302 DTC144EA (E.REC Ⓗ:ON)
QR8201 DTC144EA (SWITCHING)
QR8202 DTC144EA (SWITCHING)
QR8203 DTC144EA (REV Ⓛ:OFF)
DL8201 VLD0163
DL8202 EFD-RT325A12A
JUMP VCO
JUMP DELAY LEVEL
CHROMA DELAY LEVEL
0.5H CHROMA DELAY
PB C ADJ
(CLOCK GENERATOR)
SYNC CLAMP
CCD
CLOCK DRIVE
X3301 VSX0189
E
D
C
B
A
22
23
24
25
26
27
28

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

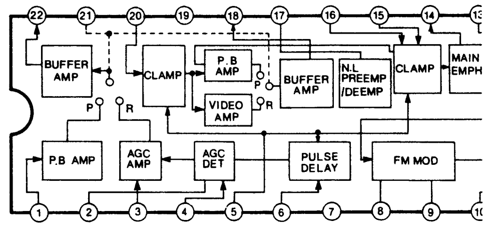
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS: SP MODE)

IC BLOCK

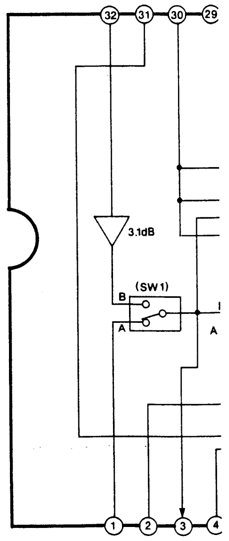
IC3401 (M51647SP)

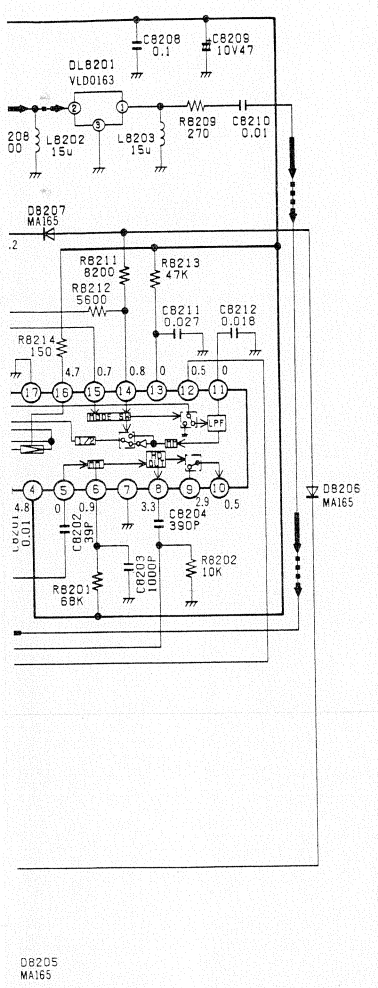

VCC2
EXP.
PIC.CONT.
CURR.DET.
DIF.AMP
AMP
1HDL FM DEM.
DOCFNC SW
DIF.AMP
LNCL LIM
MAIN FM DE
VCC1

IC3402 (AN6306)


BUFFER AMP
CLAMP
P.B AMP
VIDEO AMP
BUFFER AMP
N.L PREEMP /DEEMP
CLAMP
MAIN EMPH
P.B AMP
AGC AMP
AGC DET
PULSE DELAY
FM MOD

IC3404 (AN3321K


3.1dB
(SW1)
B
A
A


DL8201
VLD0163
C8208
0.1
C8209
10V47
L8202
15u
L8203
15u
R8209
270
C8210
0.01
D8207
MA165
R8211
8200
R8213
4.7K
R8212
5600
C8211
0.027
C8212
0.018
R8214
150
D8206
MA165
C8202
39P
C8203
1000P
C8204
390P
R8202
10K
R8201
68K
D8205
MA165

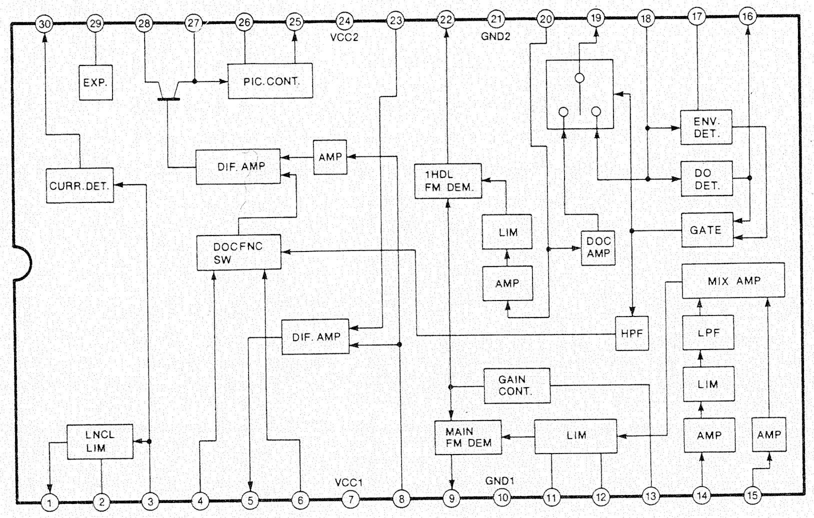
CKETS (   ) ON THIS DIAGRAM IS RECORD MODE

BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE

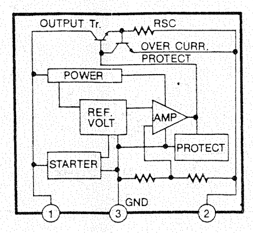
28

IC BLOCK

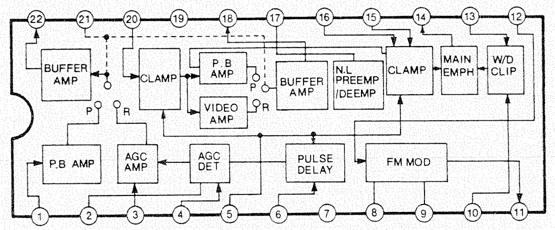
IC3401 (M51647SP)


VCC2
GND2
EXP.
PIC.CONT.
CURR.DET.
DIF. AMP
AMP
1HDL FM DEM.
LIM
DOC AMP
ENV. DET.
DO DET.
GATE
MIX AMP
DOCFNC SW
AMP
DIF. AMP
HPF
LPF
LIM
GAIN CONT.
MAIN FM DEM
LIM
AMP
AMP
LNCL LIM
VCC1
GND1

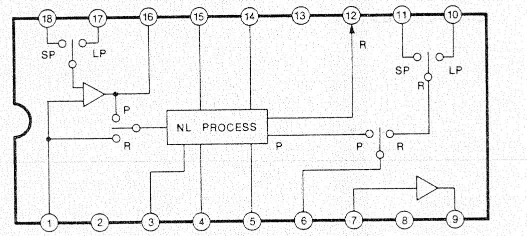
IC3303 (AN78L09)


OUTPUT Tr.
RSC
OVER CURR. PROTECT
POWER
REF. VOLT
AMP
PROTECT
STARTER
GND

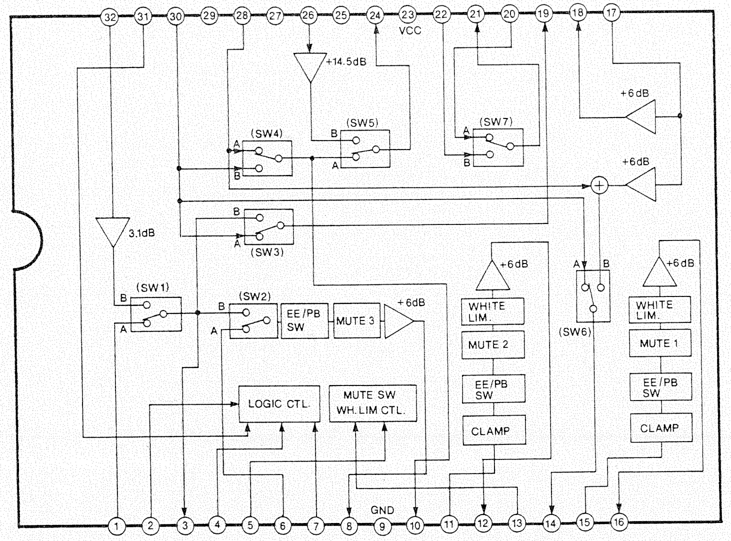
IC3402 (AN6306)


BUFFER AMP
CLAMP
P.B AMP
VIDEO AMP
BUFFER AMP
NL PREEMP /DEEMP
CLAMP
MAIN EMPH
W/D CLIP
P.B AMP
AGC AMP
AGC DET
PULSE DELAY
FM MOD

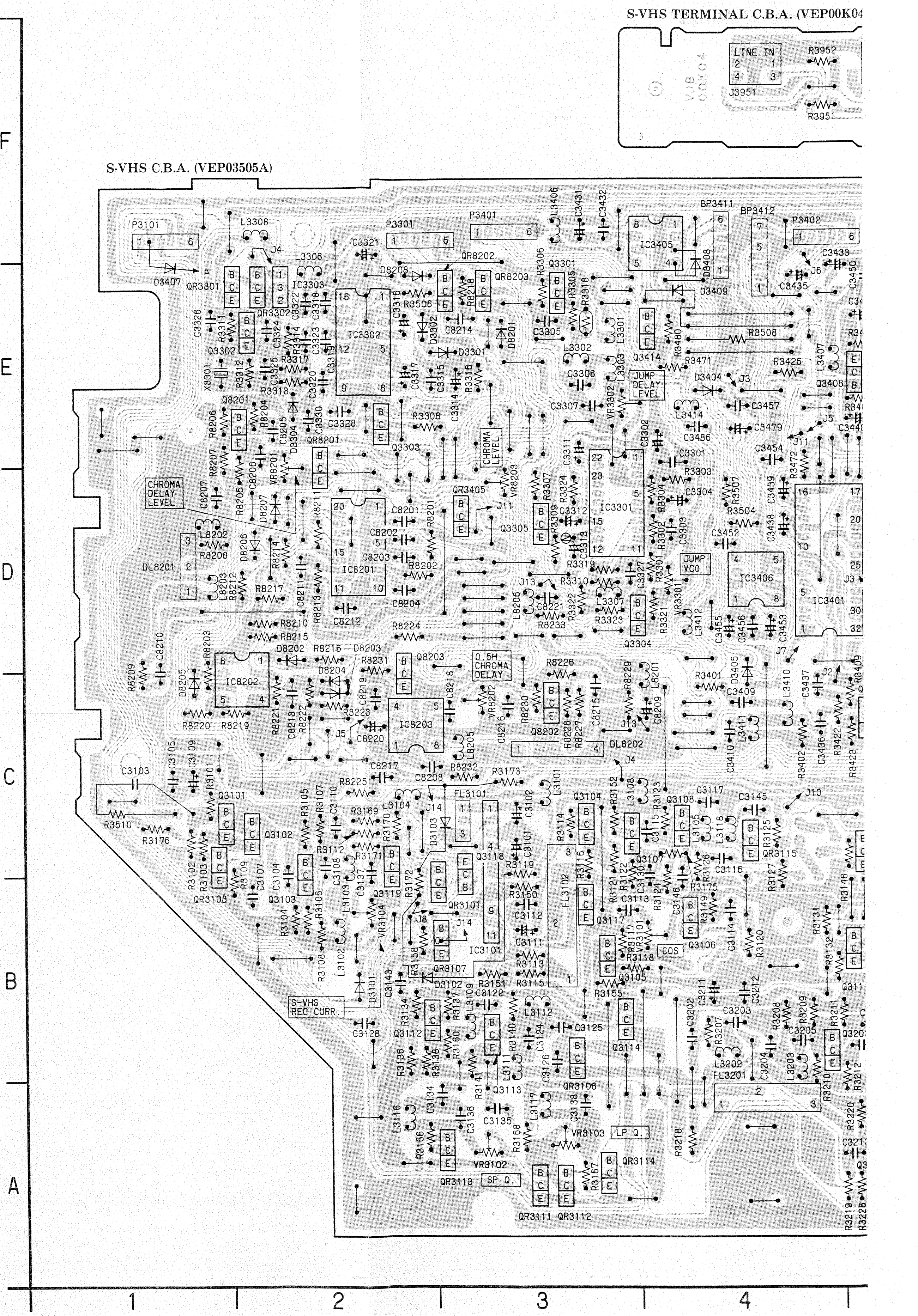
IC3403 (VC2031DP)


SP
LP
NL PROCESS
P
R

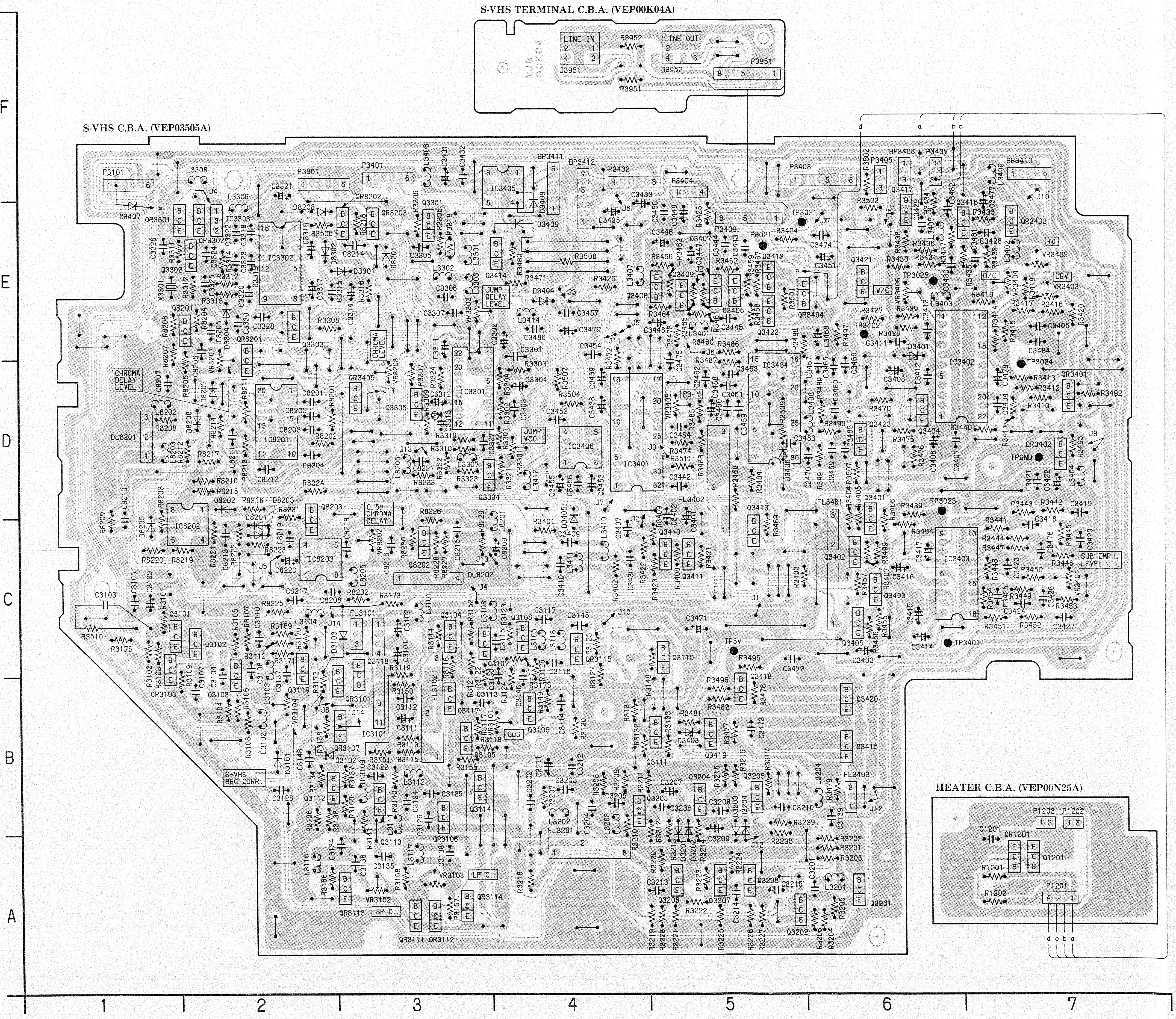
IC3404 (AN3321K)


+14.5dB
VCC
(SW4)
(SW5)
(SW7)
+6dB
+6dB
3.1dB
(SW3)
(SW1)
(SW2)
EE/PB SW
MUTE 3
+6dB
WHITE LIM.
MUTE 2
EE/PB SW
CLAMP
LOGIC CTL.
MUTE SW WH.LIM CTL.
(SW6)
WHITE LIM.
MUTE 1
EE/PB SW
CLAMP
GND

3-21. S-VHS C.B.A. (VEP03505A)


S-VHS TERMINAL C.B.A. (VEP00K04
LINE IN
J3951
R3952
R3951
S-VHS C.B.A. (VEP03505A)
F
E
D
C
B
A
1
2
3
4
IC3405
IC3302
IC3303
IC3301
IC3406
IC3401
IC8201
IC8202
IC8203
IC3101
CHROMA DELAY LEVEL
JUMP DELAY LEVEL
CHROMA LEVEL
JUMP VCO
0.5H CHROMA DELAY
S-VHS REC CURR.
COS
LP Q.
SP Q.

3-21. S-VHS C.B.A. (VEP03505A)


S-VHS TERMINAL C.B.A. (VEP00K04A)
LINE IN
LINE OUT
J3951
J3952
P3951
R3951
R3952
S-VHS C.B.A. (VEP03505A)
CHROMA DELAY LEVEL
JUMP DELAY LEVEL
CHROMA LEVEL
JUMP VCO
0.5H CHROMA DELAY
SUB EMPH. LEVEL
S-VHS REC CURR.
PB-Y
D/C
W/C
DEV
FO
COS
SP Q.
LP Q.
TP5V
TPGND
HEATER C.B.A. (VEP00N25A)
P1203
P1202
P1201
Q1201
QR1201
C1201
R1201
R1202
F
E
D
C
B
A
1
2
3
4
5
6
7

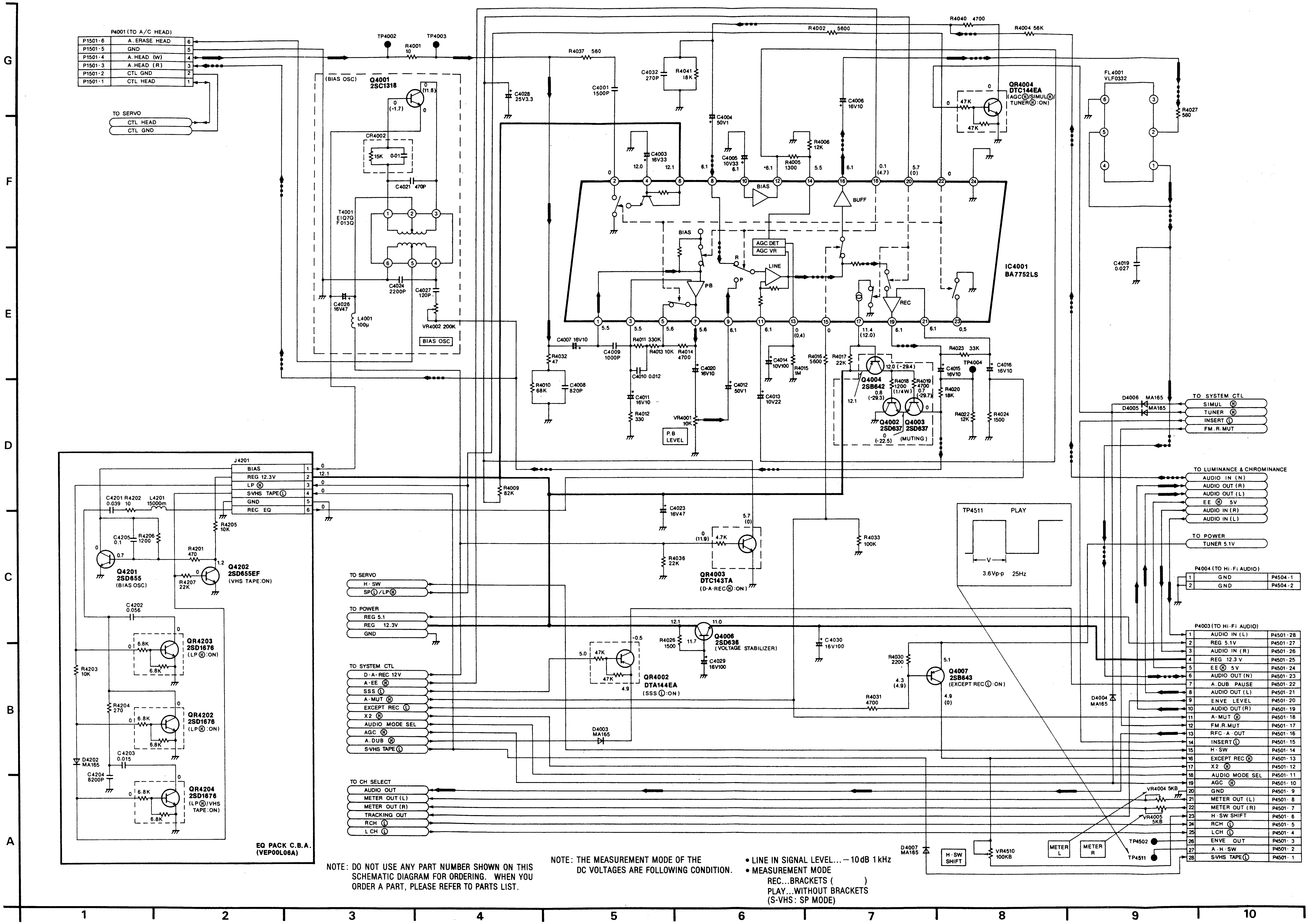
S-VHS C.B.A.	
Transistor	
Q1201	A-7
Q3101	C-1
Q3102	C-2
Q3103	B-2
Q3104	C-3
Q3105	B-3
Q3106	B-4
Q3107	C-4
Q3108	C-4
Q3110	C-5
Q3111	B-5
Q3112	B-2
Q3113	A-3
Q3114	B-3
Q3117	B-3
Q3118	B-3
Q3119	B-2
Q3201	A-6
Q3202	A-5
Q3203	B-5
Q3204	B-5
Q3205	B-5
Q3206	A-5
Q3207	A-5
Q3208	A-5
Q3301	E-3
Q3302	E-2
Q3303	E-2
Q3304	D-3
Q3305	D-3
Q3401	D-6
Q3402	C-6
Q3403	C-6
Q3404	D-6
Q3405	C-6
Q3406	E-5
Q3407	E-5
Q3408	E-5
Q3409	E-5
Q3410	C-5
Q3411	C-5
Q3412	E-5
Q3413	D-5
Q3414	E-4
Q3415	B-6
Q3416	E-7
Q3417	F-6
Q3418	B-5
Q3419	B-5
Q3420	B-6
Q3421	E-6
Q3422	E-5
Q3423	D-6
Q8201	E-2
Q8202	C-3
Q8203	D-2
Transistor & Resistor	
QR1201	A-7
QR3101	C-3
QR3103	B-1
QR3106	A-3
QR3107	B-3
QR3111	A-3
QR3112	A-3
QR3113	A-3
QR3114	A-3
QR3115	C-4
QR3301	E-1
QR3302	E-2
QR3401	D-7
QR3402	D-7
QR3403	E-7
QR3405	D-3
QR8201	E-2
QR8202	F-3
QR8203	E-3
Integrated Circuit	
IC3101	C-3
IC3301	D-3
IC3302	E-2
IC3303	E-2
IC3401	D-4
IC3402	D-6
IC3403	C-6
IC3404	D-5
IC3405	F-4
IC3406	D-4
IC8201	D-2
IC8202	C-2
IC8203	C-2
Test Point	
TP3021	E-5
TP3023	D-6
TP3024	D-7
TP3025	E-6
TP3401	C-6
TP3402	E-6
TP8021	E-5
TP 5V	C-5
TP GND	D-7
Adjustment	
VR3101	B-4
VR3102	A-3
VR3103	A-3
VR3104	B-2
VR3301	D-4
VR3302	E-3
VR3401	C-7
VR3402	E-7
VR3403	E-7
VR3404	E-7
VR3405	D-5
VR3406	E-6
VR8201	E-2
VR8202	C-3
VR8203	D-3
Connector	
P1201	A-7
P1202	B-7
P1203	B-7
P3101	F-1
P3301	F-2
P3401	F-3
P3402	F-4
P3403	F-5
P3404	F-5
P3405	F-6
P3407	F-6
P3409	E-5
P3951	F-5
BP3408	F-6
BP3410	F-7
BP3411	F-4
BP3412	F-4

ADDRESS INFORMATION

Next Page:
AUDIO & Hi-Fi AUDIO Section

3-22. AUDIO SCHEMATIC DIAGRAM

◀■ ■ ■ ■ MAIN SIGNAL PATH IN REC MODE ◀━━━ MAIN SIGNAL PATH IN PLAYBACK MODE



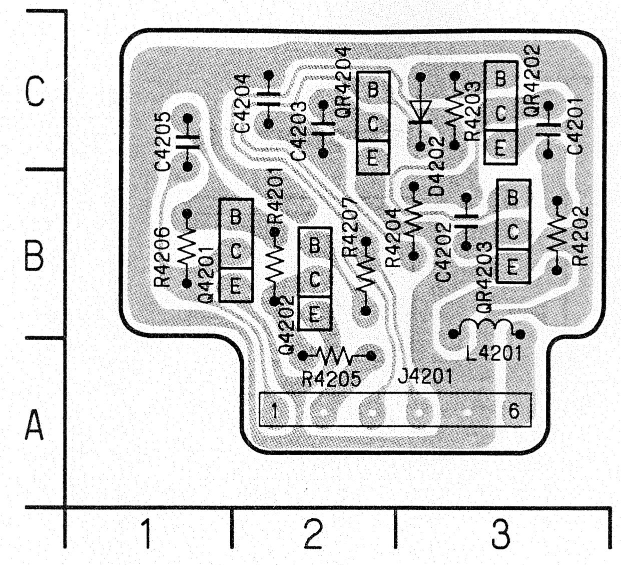
P4001 (TO A/C HEAD)
P1501-6 A. ERASE HEAD 6
P1501-5 GND 5
P1501-4 A. HEAD (W) 4
P1501-3 A. HEAD (R) 3
P1501-2 CTL GND 2
P1501-1 CTL HEAD 1
TO SERVO
CTL HEAD
CTL GND
TP4002
TP4003
R4001 10
Q4001 2SC1318
(BIAS OSC)
CR4002
T4001 EI07Q F013Q
L4001 100μ
VR4002 200K
BIAS OSC
IC4001 BA7752LS
BIAS
BUFF
AGC DET
AGC VR
LINE
PB
REC
QR4004 DTC144EA (AGC Ⓗ/SIMUL Ⓗ/TUNER Ⓗ :ON)
FL4001 VLF0332
Q4004 2SB642
Q4002 2SD637
Q4003 2SD637 (MUTING)
TP4004
VR4001 10K
P.B LEVEL
QR4003 DTC143TA (D·A·REC Ⓗ :ON)
Q4006 2SD636 (VOLTAGE STABILIZER)
QR4002 DTA144EA (SSS Ⓛ :ON)
Q4007 2SB643 (EXCEPT REC Ⓛ :ON)
D4003 MA165
D4004 MA165
D4005 MA165
D4006 MA165
D4007 MA165
TP4511 PLAY
3.6Vp-p 25Hz
J4201
1 BIAS
2 REG 12.3V
3 LP Ⓗ
4 S-VHS TAPE Ⓛ
5 GND
6 REC EQ
Q4201 2SD655 (BIAS OSC)
Q4202 2SD655EF (VHS TAPE:ON)
QR4203 2SD1676 (LP Ⓗ :ON)
QR4202 2SD1676 (LP Ⓗ :ON)
QR4204 2SD1676 (LP Ⓗ/VHS TAPE:ON)
EQ PACK C.B.A. (VEP00L06A)
TO SERVO
H·SW
SP Ⓛ/LP Ⓗ
TO POWER
REG 5.1
REG 12.3V
GND
TO SYSTEM CTL
D·A·REC 12V
A·EE Ⓗ
SSS Ⓛ
A·MUT Ⓗ
EXCEPT REC Ⓛ
X2 Ⓗ
AUDIO MODE SEL
AGC Ⓗ
A.DUB Ⓗ
S-VHS TAPE Ⓛ
TO CH SELECT
AUDIO OUT
METER OUT (L)
METER OUT (R)
TRACKING OUT
RCH Ⓛ
L CH Ⓛ
TO SYSTEM CTL
SIMUL Ⓗ
TUNER Ⓗ
INSERT Ⓛ
FM.R.MUT
TO LUMINANCE & CHROMINANCE
AUDIO IN (N)
AUDIO OUT (R)
AUDIO OUT (L)
EE Ⓗ 5V
AUDIO IN (R)
AUDIO IN (L)
TO POWER
TUNER 5.1V
P4004 (TO Hi-Fi AUDIO)
1 GND P4504-1
2 GND P4504-2
P4003 (TO Hi-Fi AUDIO)
1 AUDIO IN (L) P4501-28
2 REG 5.1V P4501-27
3 AUDIO IN (R) P4501-26
4 REG 12.3 V P4501-25
5 EE Ⓗ 5V P4501-24
6 AUDIO OUT (N) P4501-23
7 A.DUB PAUSE P4501-22
8 AUDIO OUT (L) P4501-21
9 ENVE LEVEL P4501-20
10 AUDIO OUT (R) P4501-19
11 A·MUT Ⓗ P4501-18
12 FM.R.MUT P4501-17
13 RFC·A·OUT P4501-16
14 INSERT Ⓛ P4501-15
15 H·SW P4501-14
16 EXCEPT REC Ⓗ P4501-13
17 X2 Ⓗ P4501-12
18 AUDIO MODE SEL P4501-11
19 AGC Ⓗ P4501-10
20 GND P4501-9
21 METER OUT (L) P4501-8
22 METER OUT (R) P4501-7
23 H·SW SHIFT P4501-6
24 RCH Ⓛ P4501-5
25 LCH Ⓛ P4501-4
26 ENVE OUT P4501-3
27 A·H·SW P4501-2
28 S-VHS TAPE Ⓛ P4501-1
VR4004 5KB
VR4005 5KB
VR4510 100KB
H·SW SHIFT
METER L
METER R
TP4502
TP4511
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGES ARE FOLLOWING CONDITION.

- LINE IN SIGNAL LEVEL...−10dB 1kHz
- MEASUREMENT MODE
  REC...BRACKETS ( )
  PLAY...WITHOUT BRACKETS
  (S-VHS: SP MODE)

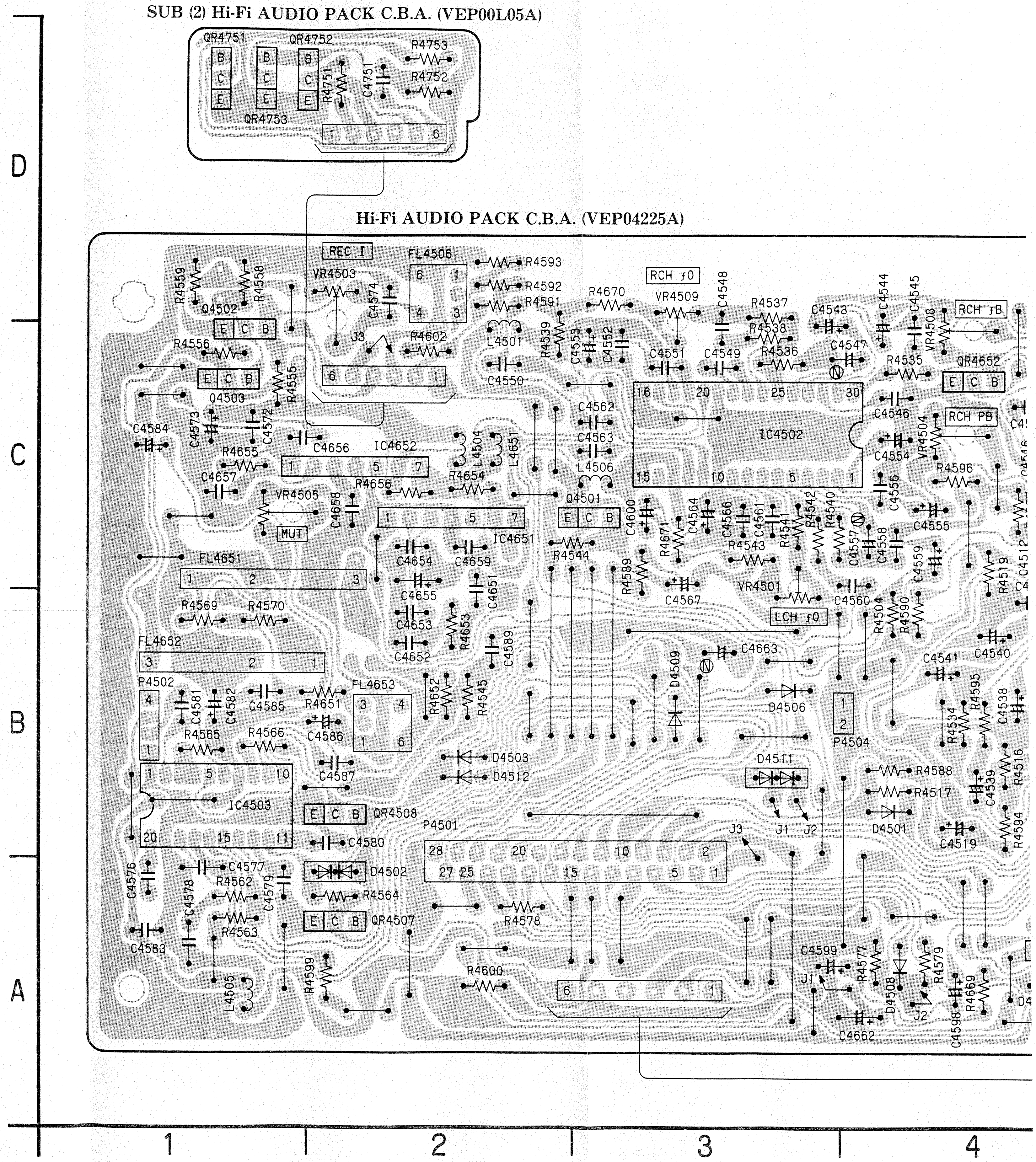
3-23. EQ PACK C.B.A. (VEP00L06A)


C
B
A
1
2
3
C4205
C4204
C4203
QR4204
D4202
R4203
QR4202
C4201
R4206
Q4201
R4201
R4207
R4204
C4202
QR4203
R4202
Q4202
R4205
J4201
L4201
B
C
E
1
6

EQ PACK C.B.A.	
Transistor	
Q4201	B-1
Q4202	B-2
Transistor & Resistor	
QR4202	C-3
QR4203	B-3
QR4204	C-2

ADDRESS INFORMATION

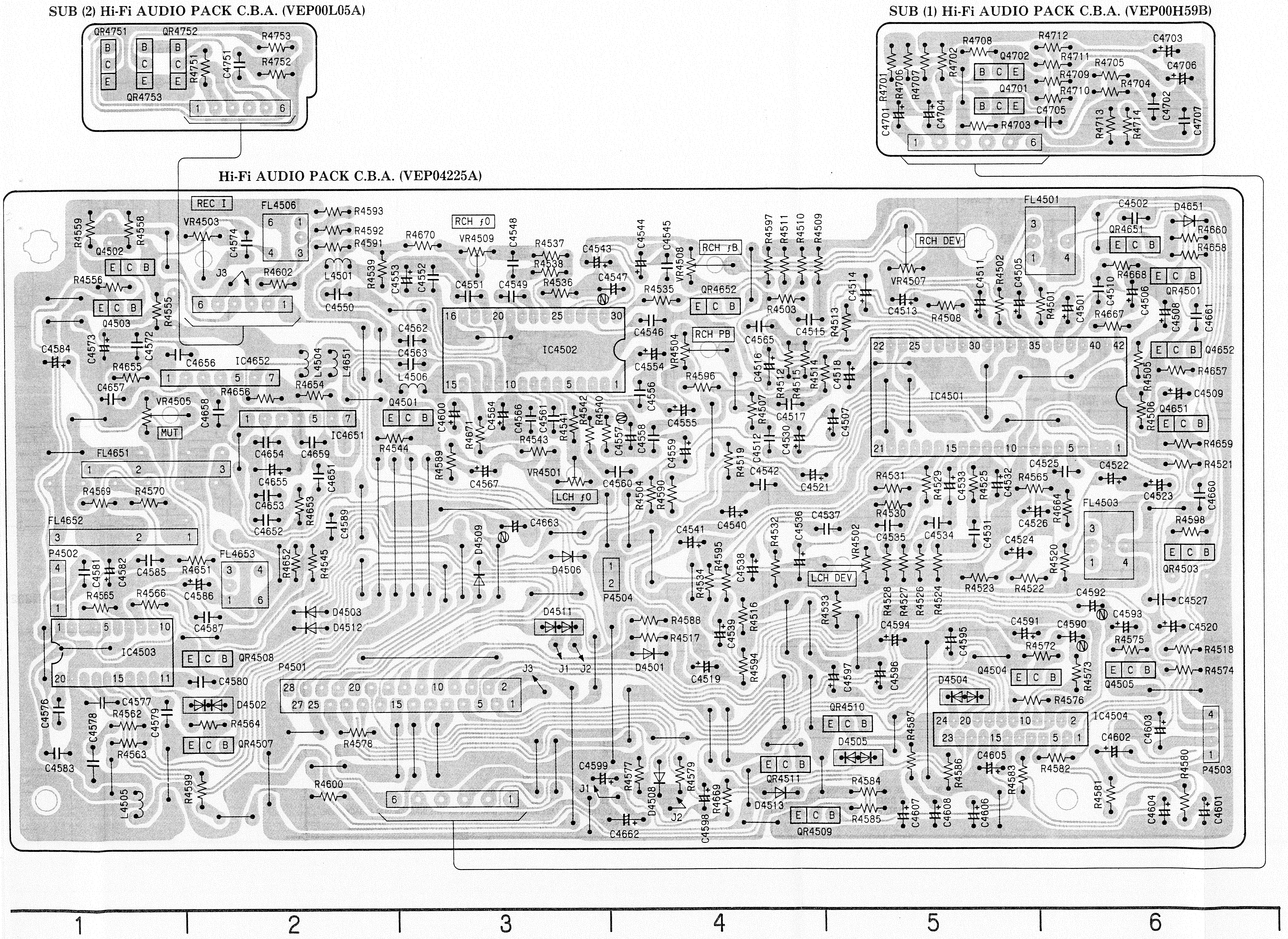
3-24. Hi-Fi AUDIO PACK C.B.A. (VEP04225A)


SUB (2) Hi-Fi AUDIO PACK C.B.A. (VEP00L05A)

Hi-Fi AUDIO PACK C.B.A. (VEP04225A)

D
C
B
A
1
2
3
4
QR4751
QR4752
QR4753
R4753
R4752
R4751
C4751
REC I
FL4506
VR4503
R4593
R4592
R4591
R4670
RCH f0
VR4509
C4548
R4537
R4538
R4536
C4543
C4544
C4545
VR4508
RCH fB
R4559
R4558
Q4502
C4574
J3
R4602
L4501
C4550
R4539
C4553
C4552
C4551
C4549
C4547
R4535
QR4652
R4556
Q4503
R4555
C4584
C4573
C4572
C4656
IC4652
R4655
L4504
L4651
C4562
C4563
L4506
IC4502
C4546
C4554
VR4504
RCH PB
R4596
C4657
VR4505
MUT
C4658
R4656
R4654
Q4501
C4600
R4671
C4564
C4566
C4561
R4541
R4542
R4540
C4557
C4558
C4556
C4555
FL4651
C4654
C4659
IC4651
R4544
R4589
R4543
C4559
R4519
C4512
R4569
R4570
C4655
C4651
C4653
R4653
C4567
VR4501
C4560
LCH f0
R4504
R4590
FL4652
C4652
C4589
C4663
D4509
C4541
C4540
P4502
C4581
C4582
C4585
R4651
FL4653
R4652
R4545
D4506
P4504
R4534
R4595
C4538
R4565
R4566
C4586
D4503
D4512
D4511
R4588
R4517
R4516
C4539
IC4503
C4587
QR4508
J1
J2
D4501
C4519
R4594
P4501
C4580
C4576
C4577
D4502
R4562
C4579
R4564
C4578
R4563
QR4507
R4578
C4583
C4599
R4577
R4579
D4508
R4669
C4598
L4505
R4599
R4600
C4662

i-Fi AUDIO PACK C.B.A. (VEP04225A)


SUB (2) Hi-Fi AUDIO PACK C.B.A. (VEP00L05A)

SUB (1) Hi-Fi AUDIO PACK C.B.A. (VEP00H59B)

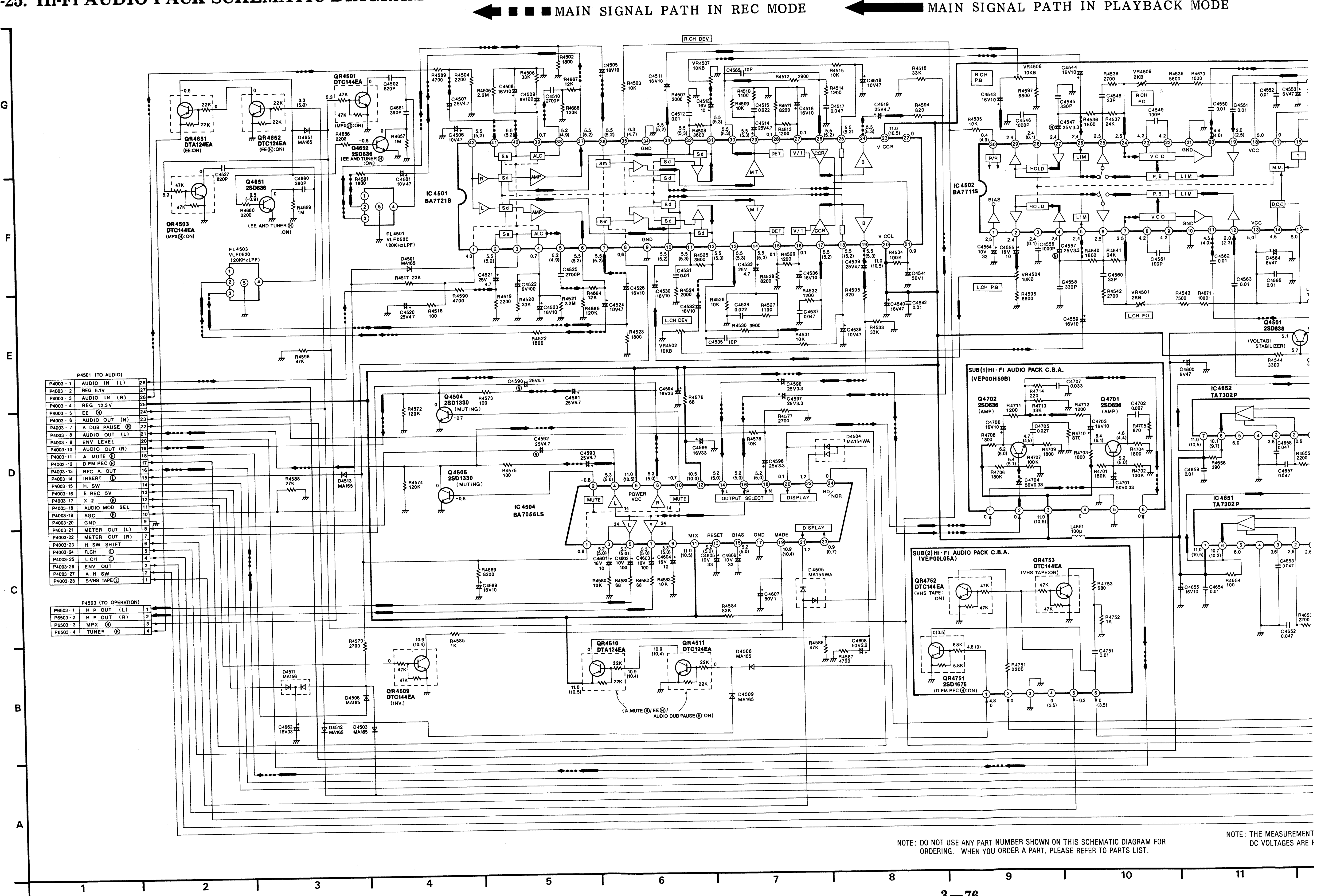
Hi-Fi AUDIO PACK C.B.A. (VEP04225A)

REC I
RCH f0
RCH fB
RCH PB
RCH DEV
LCH DEV
LCH f0
MUT
IC4501
IC4502
IC4503
IC4504
IC4651
IC4652
P4501
P4502
P4503
P4504
1
2
3
4
5
6

Hi-Fi AUDIO PACK C.B.A.	
Transistor	
Q4501	C-3
Q4503	C-1
Q4504	B-5
Q4505	B-6
Q4651	C-6
Q4652	C-6
Q4701	D-5
Q4702	D-5
Transistor & Resistor	
QR4501	C-6
QR4503	B-6
QR4507	A-2
QR4508	B-2
QR4509	A-4
QR4510	A-5
QR4511	A-4
QR4651	D-6
QR4652	C-4
QR4751	D-1
QR4752	D-2
QR4753	D-1
Integrated Circuit	
IC4501	C-5
IC4502	C-3
IC4503	B-1
IC4504	A-6
IC4651	C-2
IC4652	C-2
Adjustment	
VR4501	B-3
VR4502	B-5
VR4503	D-2
VR4504	C-4
VR4505	C-1
VR4507	C-5
VR4508	C-4
VR4509	D-3
Connector	
P4501	B-2
P4502	B-1
P4503	A-6
P4504	B-4

ADDRESS INFORMATION

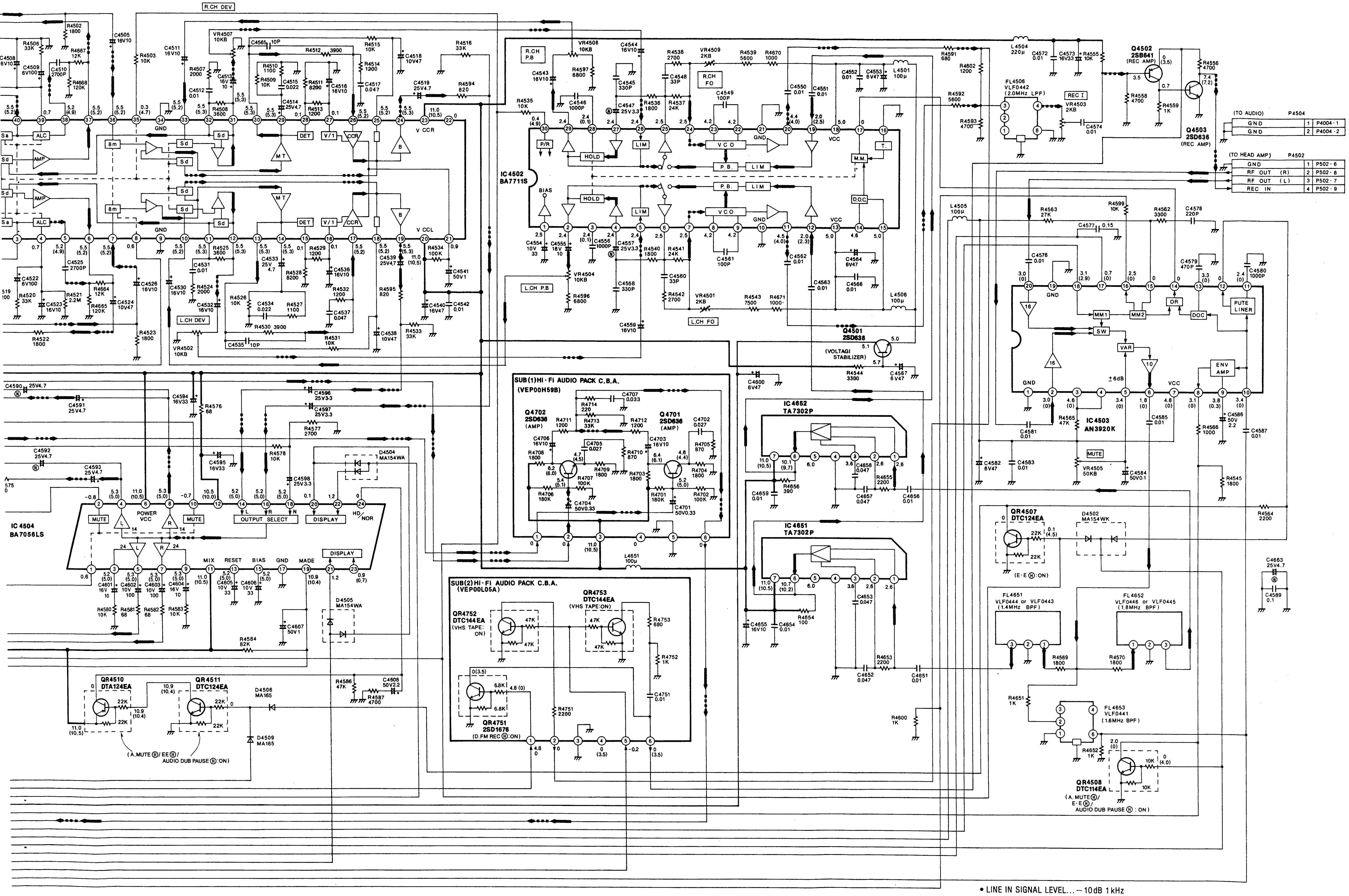
3-25. Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
IC4501 BA7721S
IC4502 BA7711S
IC4504 BA7056LS
IC4651 TA7302P
IC4652 TA7302P
QR4651 DTA124EA (EE:ON)
QR4652 DTC124EA (EE Ⓗ:ON)
QR4501 DTC144EA (MPX Ⓗ:ON)
Q4652 2SD636 (EE AND TUNER Ⓗ:ON)
QR4503 DTC144EA (MPX Ⓗ:ON)
Q4651 2SD636 (EE AND TUNER Ⓗ:ON)
FL4501 VLF0520 (20KHzLPF)
FL4503 VLF0520 (20KHzLPF)
Q4504 2SD1330 (MUTING)
Q4505 2SD1330 (MUTING)
QR4509 DTC144EA (INV.)
QR4510 DTA124EA
QR4511 DTC124EA
(A.MUTE Ⓗ/EE Ⓗ/ AUDIO DUB PAUSE Ⓗ:ON)
Q4501 2SD638 (VOLTAGI STABILIZER)
R.CH DEV
L.CH DEV
R.CH P.B
L.CH P.B
R.CH FO
L.CH FO
SUB(1)Hi-Fi AUDIO PACK C.B.A. (VEP00H59B)
Q4702 2SD636 (AMP)
Q4701 2SD636 (AMP)
SUB(2)Hi-Fi AUDIO PACK C.B.A. (VEP00L05A)
QR4752 DTC144EA (VHS TAPE: ON)
QR4753 DTC144EA (VHS TAPE:ON)
QR4751 2SD1676 (D.FM REC Ⓗ:ON)
MUTE
POWER VCC
OUTPUT SELECT
DISPLAY
HD/NOR
MIX RESET BIAS GND MADE
P4501 (TO AUDIO)
P4003 · 1 AUDIO IN (L) 28
P4003 · 2 REG 5.1V 27
P4003 · 3 AUDIO IN (R) 26
P4003 · 4 REG 12.3V 25
P4003 · 5 EE Ⓗ 24
P4003 · 6 AUDIO OUT (N) 23
P4003 · 7 A. DUB PAUSE Ⓗ 22
P4003 · 8 AUDIO OUT (L) 21
P4003 · 9 ENV LEVEL 20
P4003 · 10 AUDIO OUT (R) 19
P4003 · 11 A. MUTE Ⓗ 18
P4003 · 12 D.FM REC Ⓗ 17
P4003 · 13 RFC A. OUT 16
P4003 · 14 INSERT Ⓛ 15
P4003 · 15 H. SW 14
P4003 · 16 E. REC 5V 13
P4003 · 17 X 2 Ⓗ 12
P4003 · 18 AUDIO MOD SEL 11
P4003 · 19 AGC Ⓗ 10
P4003 · 20 GND 9
P4003 · 21 METER OUT (L) 8
P4003 · 22 METER OUT (R) 7
P4003 · 23 H. SW SHIFT 6
P4003 · 24 R.CH Ⓛ 5
P4003 · 25 L.CH Ⓛ 4
P4003 · 26 ENV OUT 3
P4003 · 27 A. H SW 2
P4003 · 28 S-VHS TAPE Ⓛ 1
P4503 (TO OPERATION)
P6503 · 1 H P OUT (L) 1
P6503 · 2 H P OUT (R) 2
P6503 · 3 MPX Ⓗ 3
P6503 · 4 TUNER Ⓗ 4
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT
DC VOLTAGES ARE

■ ■ ■ ■ MAIN SIGNAL PATH IN REC MODE ◀━━ MAIN SIGNAL PATH IN PLAYBACK MODE


IC4502 BA7711S
IC4504 BA7056LS
IC4503 AN3920K
IC4651 TA7302P
IC4652 TA7302P
Q4501 2SD638 (VOLTAGE STABILIZER)
Q4502 2SB641 (REC AMP)
Q4503 2SD636 (REC AMP)
Q4701 2SD636 (AMP)
Q4702 2SD636 (AMP)
QR4751 2SD1678 (D.FM REC Ⓗ:ON)
QR4752 DTC144EA (VHS TAPE: ON)
QR4753 DTC144EA (VHS TAPE:ON)
QR4507 DTC124EA (E·E Ⓗ:ON)
QR4508 DTC114EA (A.MUTE Ⓗ/ E·E Ⓗ/ AUDIO DUB PAUSE Ⓗ : ON)
QR4510 DTA124EA
QR4511 DTC124EA
(A.MUTE Ⓗ/ EE Ⓗ/ AUDIO DUB PAUSE Ⓗ:ON)
D4502 MA154WK
D4504 MA154WA
D4505 MA154WA
D4506 MA165
D4509 MA165
FL4506 VLF0442 (2.0MHz LPF)
FL4651 VLF0444 or VLF0443 (1.4MHz BPF)
FL4652 VLF0446 or VLF0445 (1.8MHz BPF)
FL4653 VLF0441 (1.6MHz BPF)
SUB(1) HI-FI AUDIO PACK C.B.A. (VEP00H59B)
SUB(2) HI-FI AUDIO PACK C.B.A. (VEP00L05A)
R.CH DEV
L.CH DEV
R.CH P.B
L.CH P.B
R.CH FO
L.CH FO
REC I
(TO AUDIO) P4504
GND 1 P4004-1
GND 2 P4004-2
(TO HEAD AMP) P4502
GND 1 P502-6
RF OUT (R) 2 P502-8
RF OUT (L) 3 P502-7
REC IN 4 P502-9
ALC
AMP
MUTE
POWER VCC
OUTPUT SELECT
DISPLAY
HD/NOR
MIX
RESET
BIAS
GND
MADE
VCO
LIM
HOLD
P.B.
DOC
M.M.
ENV AMP
PULSE LINER
SW
VAR
MM1
MM2
OR
V CCR
V CCL

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGES ARE FOLLOWING CONDITION.

- LINE IN SIGNAL LEVEL...−10dB 1kHz
- MEASUREMENT MODE
  REC...BRACKETS ( )
  PLAY...WITHOUT BRACKETS
  (S-VHS: SP MODE)

Next Page:
HEAD AMP Section

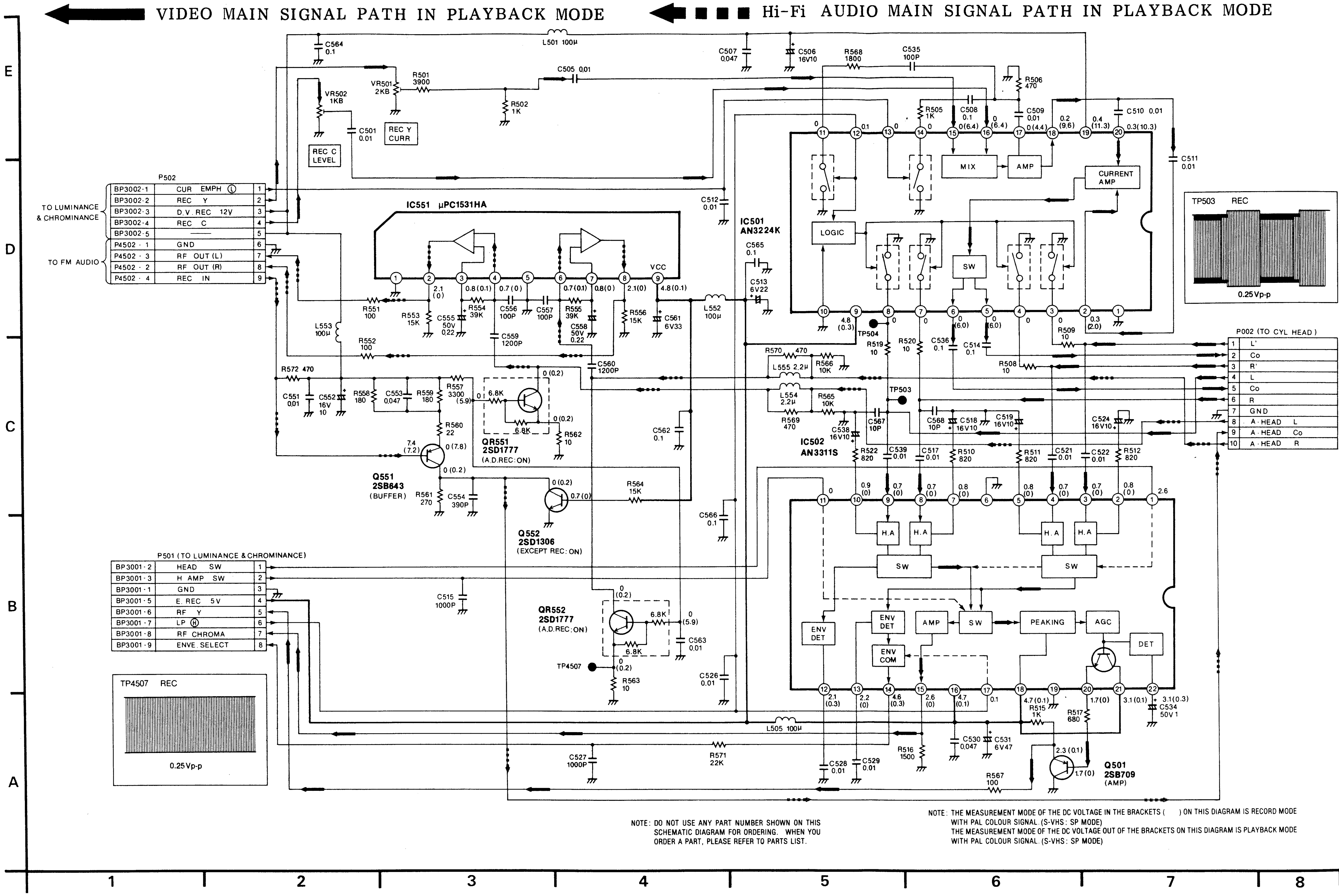
3-26. HEAD AMP SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE

Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


E
D
C
B
A
1
2
3
4
5
6
7
8
P502
BP3002·1 CUR EMPH Ⓛ 1
BP3002·2 REC Y 2
BP3002·3 D.V. REC 12V 3
BP3002·4 REC C 4
BP3002·5 5
P4502·1 GND 6
P4502·3 RF OUT (L) 7
P4502·2 RF OUT (R) 8
P4502·4 REC IN 9
TO LUMINANCE & CHROMINANCE
TO FM AUDIO
P501 (TO LUMINANCE & CHROMINANCE)
BP3001·2 HEAD SW 1
BP3001·3 H AMP SW 2
BP3001·1 GND 3
BP3001·5 E. REC 5V 4
BP3001·6 RF Y 5
BP3001·7 LP Ⓗ 6
BP3001·8 RF CHROMA 7
BP3001·9 ENVE. SELECT 8
P002 (TO CYL HEAD)
1 L'
2 Co
3 R'
4 L
5 Co
6 R
7 GND
8 A·HEAD L
9 A·HEAD Co
10 A·HEAD R
IC551 μPC1531HA
IC501 AN3224K
IC502 AN3311S
Q551 2SB643 (BUFFER)
Q552 2SD1306 (EXCEPT REC: ON)
QR551 2SD1777 (A.D.REC: ON)
QR552 2SD1777 (A.D.REC: ON)
Q501 2SB709 (AMP)
VR501 2KB
VR502 1KB
REC C LEVEL
REC Y CURR
L501 100μ
L505 100μ
L552 100μ
L553 100μ
LOGIC
MIX
AMP
CURRENT AMP
SW
H.A
ENV DET
ENV COM
PEAKING
AGC
DET
VCC
TP503
TP504
TP4507
TP503 REC
0.25Vp-p
TP4507 REC
0.25Vp-p

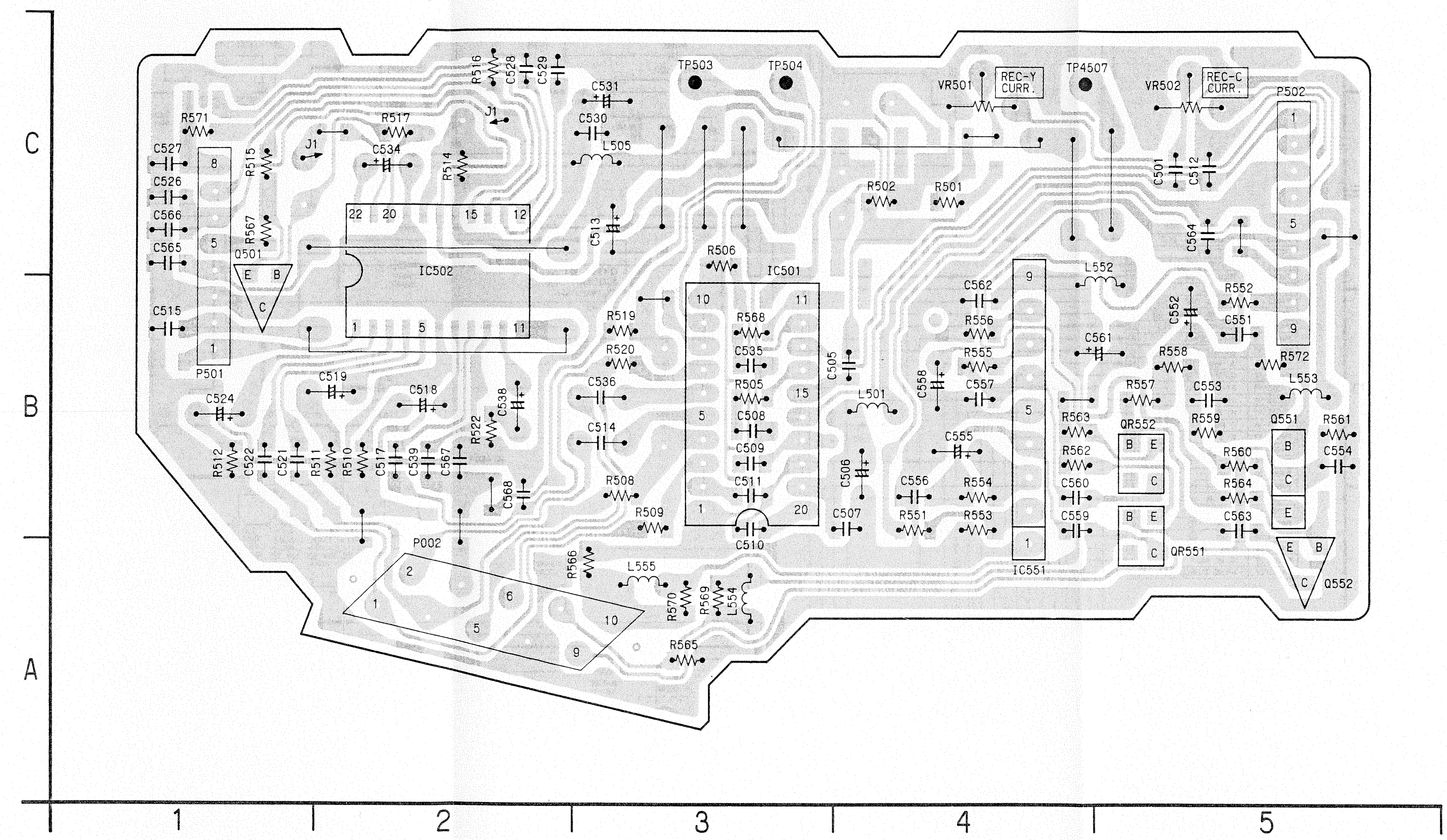
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL (S-VHS: SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL (S-VHS: SP MODE)

3-27. HEAD AMP C.B.A. (VEP05111B)

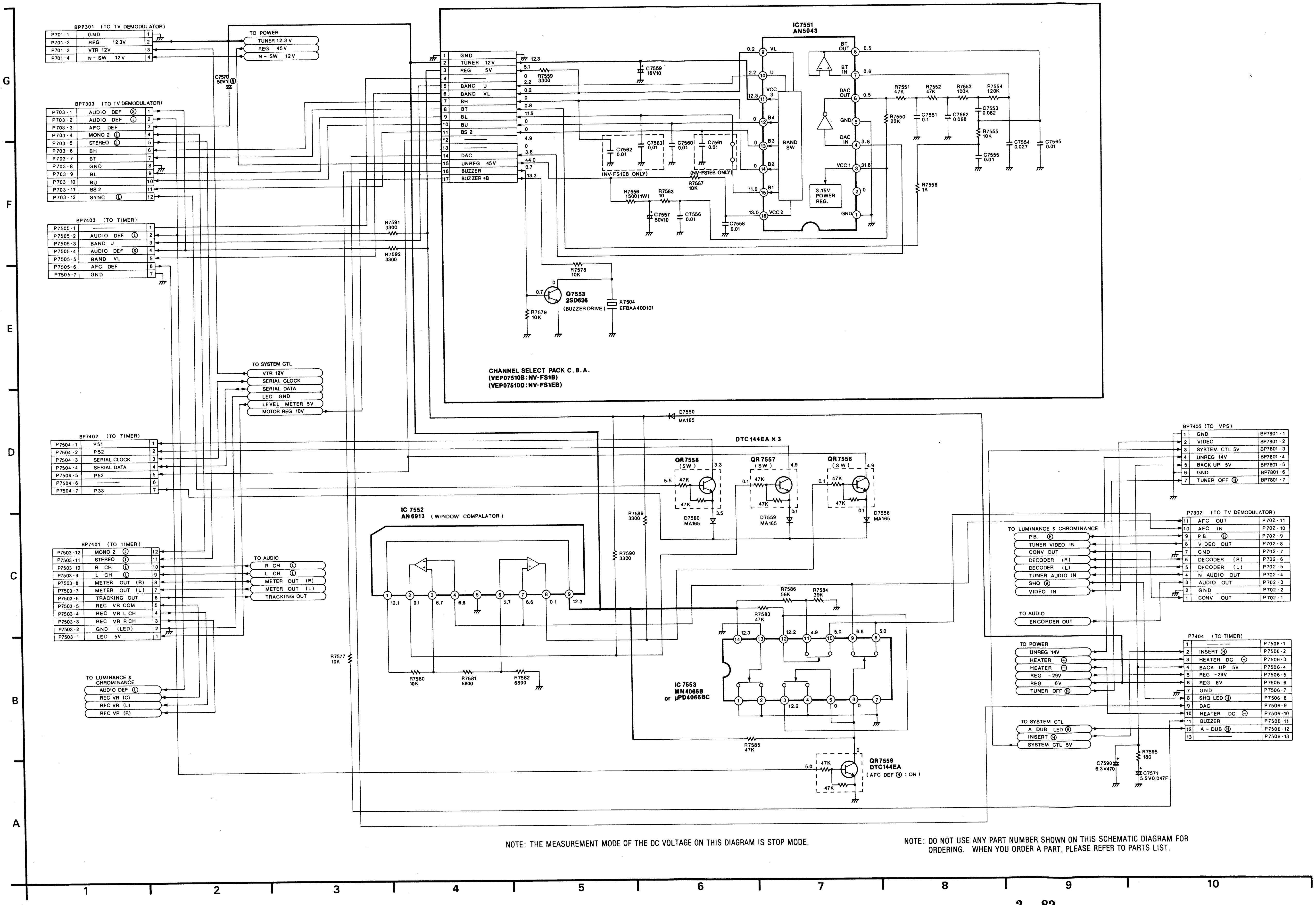
HEAD AMP C.B.A.			
Transistor		**Test Point**	
Q501	C-1	TP503	C-3
Q551	B-5	TP504	C-3
Q552	A-5	TP4507	C-4
Transistor & Resistor		**Adjustment**	
QR551	B-5	VR501	C-4
QR552	B-5	VR502	C-5
Integrated Circuit		**Connector**	
IC501	B-3	P002	A-2
IC502	C-2	P501	B-1
IC551	B-4	P502	C-5

ADDRESS INFORMATION



C
B
A
1
2
3
4
5
TP503
TP504
TP4507
VR501
REC-Y CURR.
VR502
REC-C CURR.
P502
P501
P002
IC501
IC502
IC551
Q501
Q551
Q552
QR551
QR552
J1
R571
C527
C526
C566
C565
C515
C524
R515
R567
R517
C534
R514
R516
C528
C529
C531
C530
L505
C513
R502
R501
C501
C512
C564
R506
L552
C562
R568
R556
R555
C535
R505
C508
C509
C511
C510
C505
L501
C558
C557
C555
C556
R551
R554
R553
C507
C506
R519
R520
C536
C514
R508
R509
C519
C518
R522
C538
C568
R512
C522
C521
R511
R510
C517
C539
C567
C561
C552
R552
C551
R558
R572
L553
R557
C553
R563
R562
C560
C559
R559
R560
R564
C563
R561
C554
R566
L555
R570
R569
L554
R565

3-28. CHANNEL SELECT SCHEMATIC DIAGRAM


BP7301 (TO TV DEMODULATOR)
P701·1 GND 1
P701·2 REG 12.3V 2
P701·3 VTR 12V 3
P701·4 N-SW 12V 4
TO POWER
TUNER 12.3 V
REG 45V
N-SW 12V
C7570 50V1
BP7303 (TO TV DEMODULATOR)
P703·1 AUDIO DEF Ⓢ
P703·2 AUDIO DEF Ⓛ
P703·3 AFC DEF
P703·4 MONO 2 Ⓛ
P703·5 STEREO Ⓛ
P703·6 BH
P703·7 BT
P703·8 GND
P703·9 BL
P703·10 BU
P703·11 BS 2
P703·12 SYNC Ⓛ
BP7403 (TO TIMER)
P7505·1
P7505·2 AUDIO DEF Ⓛ
P7505·3 BAND U
P7505·4 AUDIO DEF Ⓢ
P7505·5 BAND VL
P7505·6 AFC DEF
P7505·7 GND
R7591 3300
R7592 3300
1 GND
2 TUNER 12V
3 REG 5V
4
5 BAND U
6 BAND VL
7 BH
8 BT
9 BL
10 BU
11 BS 2
12
13
14 DAC
15 UNREG 45V
16 BUZZER
17 BUZZER +B
12.3
5.1
R7559 3300
C7559 16V10
IC7551 AN5043
VL
U
VCC 3
B4
B3
B2
B1
VCC2
BAND SW
BT OUT
BT IN
DAC OUT
GND
DAC IN
VCC 1
3.15V POWER REG.
R7551 47K
R7552 47K
R7553 100K
R7554 120K
R7550 22K
C7551 0.1
C7552 0.068
C7553 0.082
R7555 10K
C7555 0.01
C7554 0.027
C7565 0.01
R7558 1K
C7562 0.01
C7563 0.01
C7560 0.01
C7561 0.01
(NV-FS1EB ONLY)
(NV-FS1EB ONLY)
R7557 10K
R7556 1500(1W)
R7563 10
C7557 50V10
C7556 0.01
C7558 0.01
R7578 10K
Q7553 2SD636 (BUZZER DRIVE)
R7579 10K
X7504 EFBAA400D101
CHANNEL SELECT PACK C.B.A.
(VEP07510B:NV-FS1B)
(VEP07510D:NV-FS1EB)
TO SYSTEM CTL
VTR 12V
SERIAL CLOCK
SERIAL DATA
LED GND
LEVEL METER 5V
MOTOR REG 10V
D7550 MA165
DTC144EA × 3
QR7558 (SW)
QR7557 (SW)
QR7556 (SW)
47K
D7560 MA165
D7559 MA165
D7558 MA165
R7589 3300
R7590 3300
BP7402 (TO TIMER)
P7504·1 P51
P7504·2 P52
P7504·3 SERIAL CLOCK
P7504·4 SERIAL DATA
P7504·5 P53
P7504·6
P7504·7 P33
IC 7552 AN6913 (WINDOW COMPALATOR)
R7580 10K
R7581 5600
R7582 6800
R7577 10K
BP7401 (TO TIMER)
P7503·12 MONO 2 Ⓛ
P7503·11 STEREO Ⓛ
P7503·10 R CH Ⓛ
P7503·9 L CH Ⓛ
P7503·8 METER OUT (R)
P7503·7 METER OUT (L)
P7503·6 TRACKING OUT
P7503·5 REC VR COM
P7503·4 REC VR L CH
P7503·3 REC VR R CH
P7503·2 GND (LED)
P7503·1 LED 5V
TO AUDIO
R CH Ⓛ
L CH Ⓛ
METER OUT (R)
METER OUT (L)
TRACKING OUT
TO LUMINANCE & CHROMINANCE
AUDIO DEF Ⓛ
REC VR (C)
REC VR (L)
REC VR (R)
R7586 56K
R7584 39K
R7583 47K
IC 7553 MN4066B or μPD4066BC
R7585 47K
QR7559 DTC144EA (AFC DEF Ⓗ : ON)
BP7405 (TO VPS)
1 GND BP7801·1
2 VIDEO BP7801·2
3 SYSTEM CTL 5V BP7801·3
4 UNREG 14V BP7801·4
5 BACK UP 5V BP7801·5
6 GND BP7801·6
7 TUNER OFF Ⓗ BP7801·7
P7302 (TO TV DEMODULATOR)
11 AFC OUT P702·11
10 AFC IN P702·10
9 PB Ⓗ P702·9
8 VIDEO OUT P702·8
7 GND P702·7
6 DECODER (R) P702·6
5 DECODER (L) P702·5
4 N. AUDIO OUT P702·4
3 AUDIO OUT P702·3
2 GND P702·2
1 CONV OUT P702·1
TO LUMINANCE & CHROMINANCE
PB Ⓗ
TUNER VIDEO IN
CONV OUT
DECODER (R)
DECODER (L)
TUNER AUDIO IN
SHQ Ⓗ
VIDEO IN
TO AUDIO
ENCORDER OUT
P7404 (TO TIMER)
1 P7506·1
2 INSERT Ⓗ P7506·2
3 HEATER DC ⊕ P7506·3
4 BACK UP 5V P7506·4
5 REG -29V P7506·5
6 REG 6V P7506·6
7 GND P7506·7
8 SHQ LED Ⓗ P7506·8
9 DAC P7506·9
10 HEATER DC ⊖ P7506·10
11 BUZZER P7506·11
12 A-DUB Ⓗ P7506·12
13 P7506·13
TO POWER
UNREG 14V
HEATER ⊕
HEATER ⊖
REG -29V
REG 6V
TUNER OFF Ⓗ
TO SYSTEM CTL
A-DUB LED Ⓗ
INSERT Ⓗ
SYSTEM CTL 5V
C7590 6.3V470
R7595 180
C7571 5.5V0.047F
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

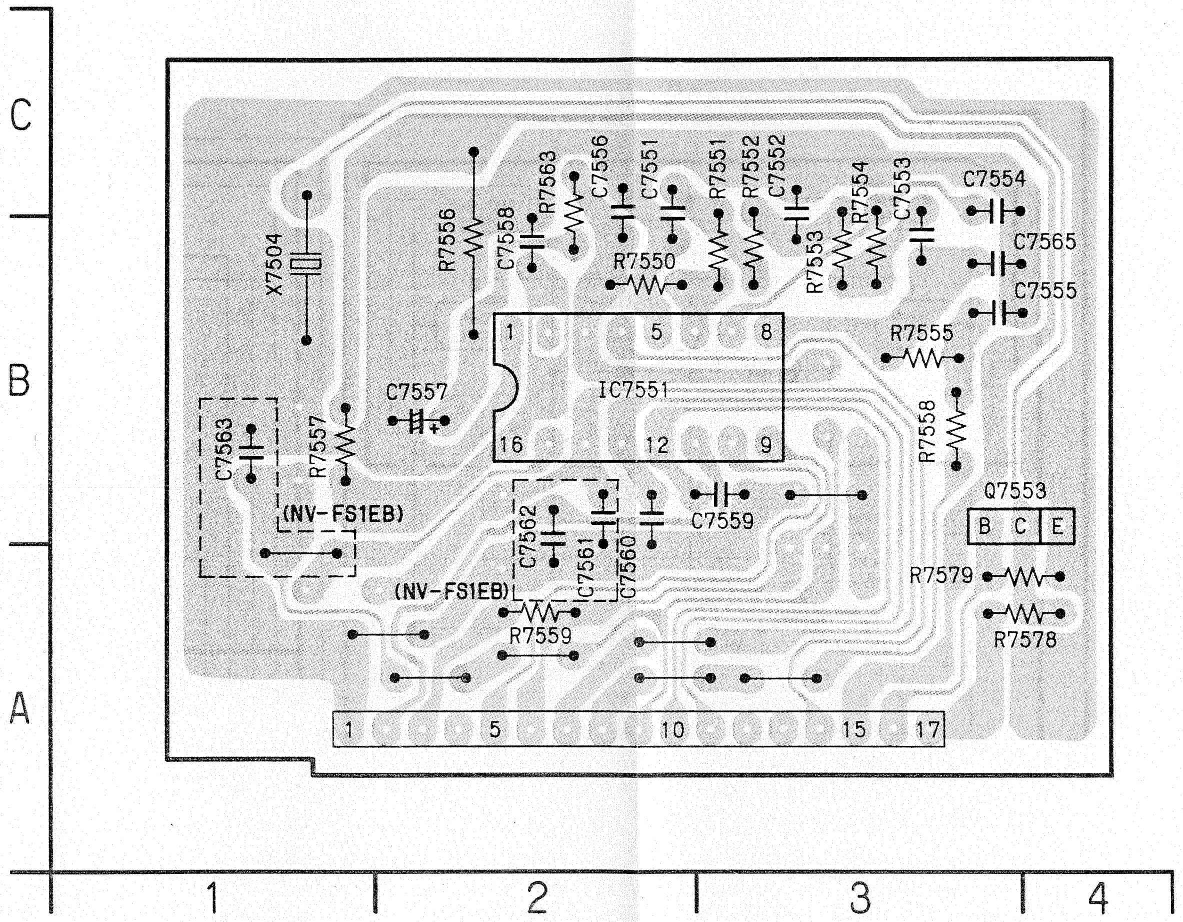
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-29. CHANNEL SELECT PACK C.B.A. (VEP07510B: NV-FS1B) (VEP07510D: NV-FS1EB)

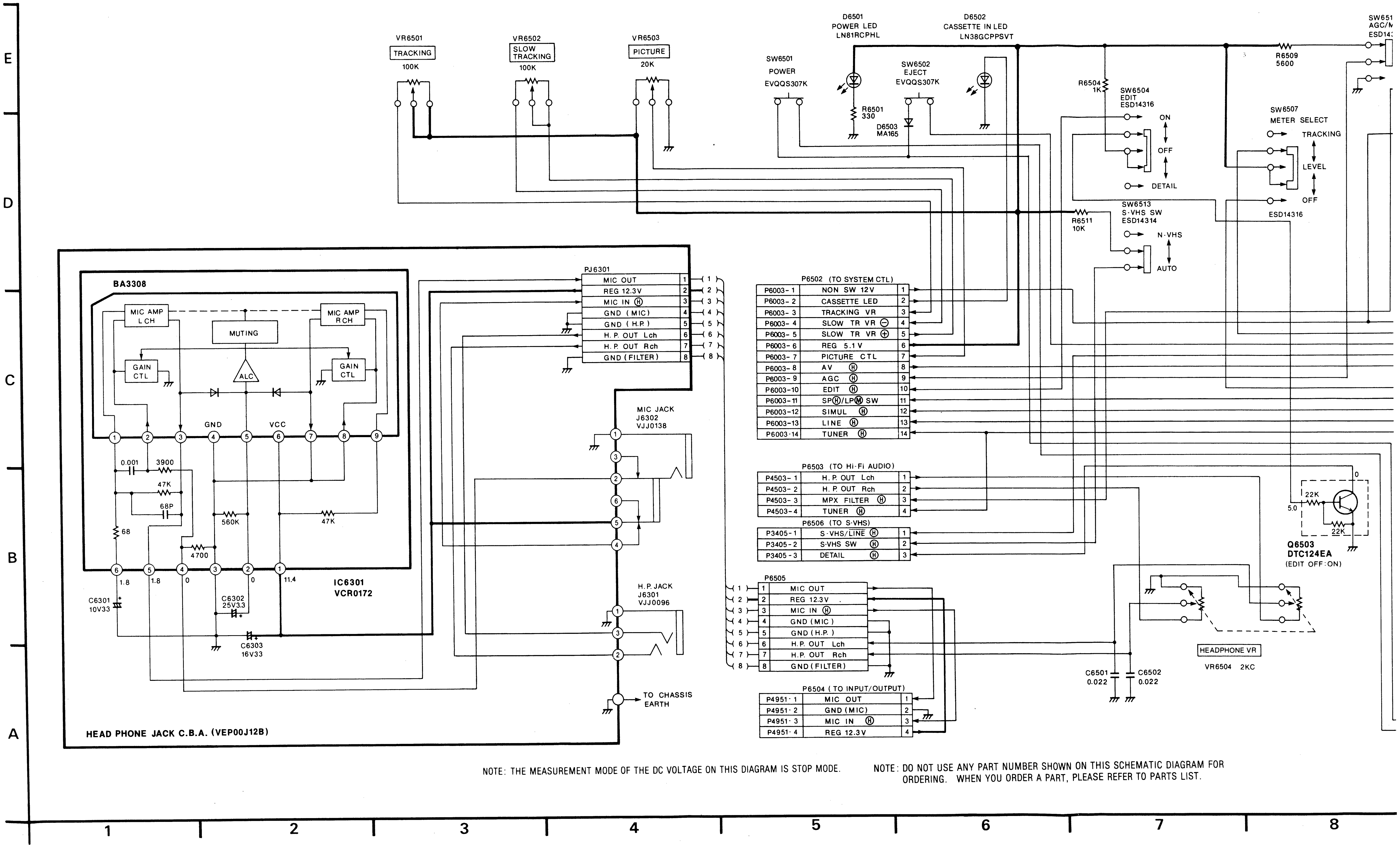
CHANNEL SELECT PACK C.B.A.	
Transistor	
Q7553	B-3
Integrated Circuit	
IC7551	B-2

ADDRESS INFORMATION


C
B
A
1
2
3
4
X7504
R7556
C7558
R7563
C7556
C7551
R7550
R7551
R7552
C7552
R7553
R7554
C7553
C7554
C7565
C7555
R7555
IC7551
1
5
8
16
12
9
C7557
C7563
R7557
(NV-FS1EB)
C7562
C7561
C7560
(NV-FS1EB)
C7559
R7558
Q7553
B
C
E
R7579
R7578
R7559
1
5
10
15
17

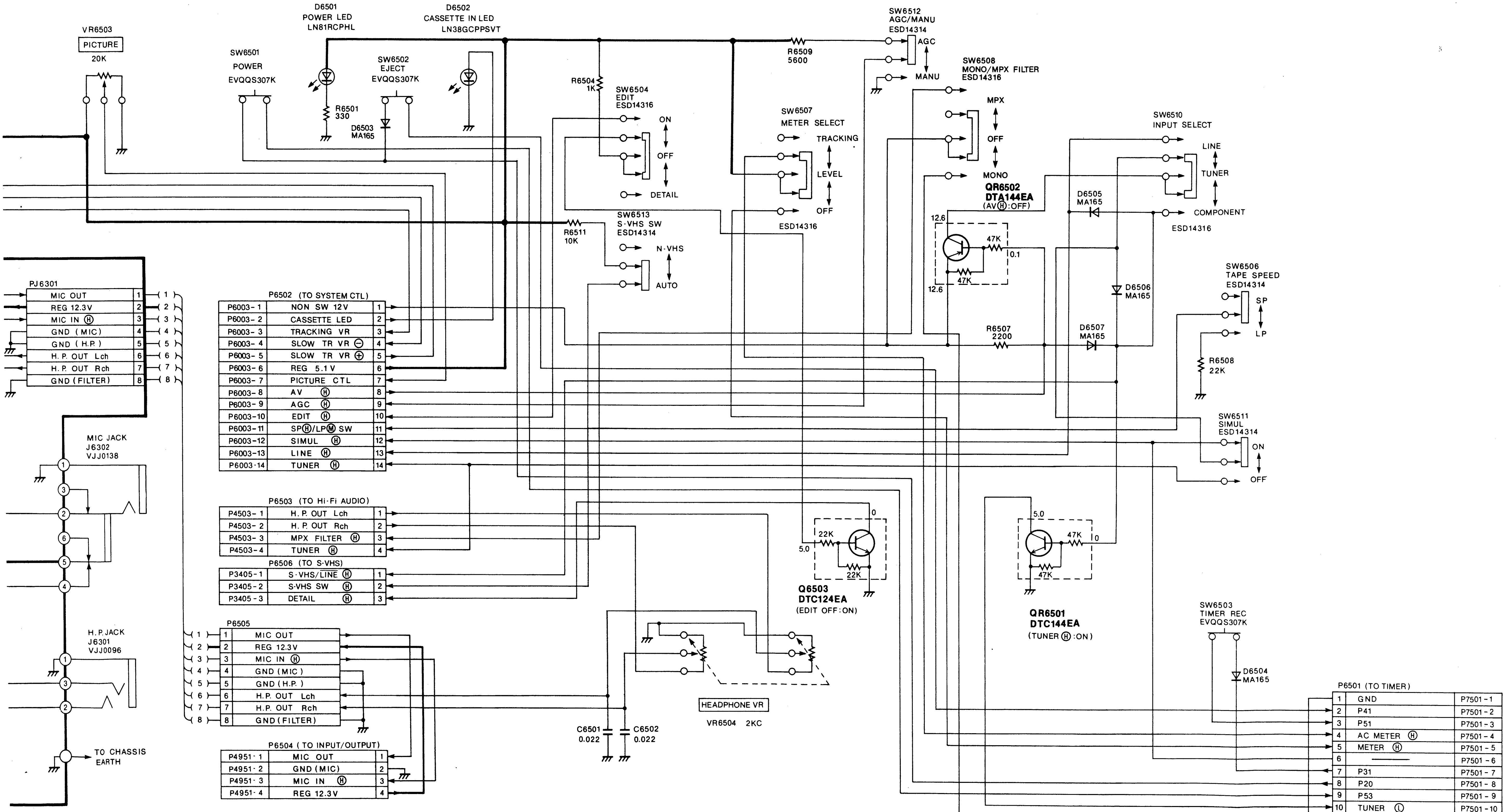
Next Page:
OPERATION Section

3-30. OPERATION SCHEMATIC DIAGRAM


E
D
C
B
A
1
2
3
4
5
6
7
8
VR6501
TRACKING
100K
VR6502
SLOW TRACKING
100K
VR6503
PICTURE
20K
SW6501
POWER
EVQQS307K
D6501
POWER LED
LN81RCPHL
R6501
330
D6503
MA165
SW6502
EJECT
EVQQS307K
D6502
CASSETTE IN LED
LN38GCPPSVT
R6504
1K
SW6504
EDIT
ESD14316
ON
OFF
DETAIL
R6509
5600
SW651
AGC/M
ESD14
SW6507
METER SELECT
TRACKING
LEVEL
OFF
ESD14316
R6511
10K
SW6513
S-VHS SW
ESD14314
N-VHS
AUTO
BA3308
MIC AMP LCH
MIC AMP RCH
MUTING
GAIN CTL
ALC
GAIN CTL
GND
VCC
0.001
3900
47K
68P
68
560K
47K
4700
1.8
1.8
0
0
11.4
C6301
10V33
C6302
25V3.3
C6303
16V33
IC6301
VCR0172
HEAD PHONE JACK C.B.A. (VEP00J12B)
PJ6301
MIC OUT
REG 12.3V
MIC IN Ⓗ
GND (MIC)
GND (H.P.)
H. P. OUT Lch
H. P. OUT Rch
GND (FILTER)
MIC JACK
J6302
VJJ0138
H.P. JACK
J6301
VJJ0096
TO CHASSIS EARTH
P6502 (TO SYSTEM CTL)
P6003-1 NON SW 12V 1
P6003-2 CASSETTE LED 2
P6003-3 TRACKING VR 3
P6003-4 SLOW TR VR ⊖ 4
P6003-5 SLOW TR VR ⊕ 5
P6003-6 REG 5.1V 6
P6003-7 PICTURE CTL 7
P6003-8 AV Ⓗ 8
P6003-9 AGC Ⓗ 9
P6003-10 EDIT Ⓗ 10
P6003-11 SPⒽ/LPⓂ SW 11
P6003-12 SIMUL Ⓗ 12
P6003-13 LINE Ⓗ 13
P6003-14 TUNER Ⓗ 14
P6503 (TO Hi-Fi AUDIO)
P4503-1 H. P. OUT Lch 1
P4503-2 H. P. OUT Rch 2
P4503-3 MPX FILTER Ⓗ 3
P4503-4 TUNER Ⓗ 4
P6506 (TO S-VHS)
P3405-1 S-VHS/LINE Ⓗ 1
P3405-2 S-VHS SW Ⓗ 2
P3405-3 DETAIL Ⓗ 3
P6505
1 MIC OUT
2 REG 12.3V
3 MIC IN Ⓗ
4 GND (MIC)
5 GND (H.P.)
6 H.P. OUT Lch
7 H.P. OUT Rch
8 GND (FILTER)
P6504 (TO INPUT/OUTPUT)
P4951-1 MIC OUT 1
P4951-2 GND (MIC) 2
P4951-3 MIC IN Ⓗ 3
P4951-4 REG 12.3V 4
C6501
0.022
C6502
0.022
HEADPHONE VR
VR6504 2KC
0
5.0
22K
22K
Q6503
DTC124EA
(EDIT OFF: ON)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.


VR6503
PICTURE
20K
SW6501
POWER
EVQQS307K
D6501
POWER LED
LN81RCPHL
R6501
330
SW6502
EJECT
EVQQS307K
D6503
MA165
D6502
CASSETTE IN LED
LN38GCPPSVT
R6504
1K
SW6504
EDIT
ESD14316
ON
OFF
DETAIL
R6511
10K
SW6513
S-VHS SW
ESD14314
N-VHS
AUTO
R6509
5600
SW6512
AGC/MANU
ESD14314
AGC
MANU
SW6507
METER SELECT
TRACKING
LEVEL
OFF
ESD14316
SW6508
MONO/MPX FILTER
ESD14316
MPX
OFF
MONO
QR6502
DTA144EA
(AV Ⓗ:OFF)
12.6
47K
0.1
47K
12.6
R6507
2200
D6505
MA165
D6506
MA165
D6507
MA165
SW6510
INPUT SELECT
LINE
TUNER
COMPONENT
ESD14316
SW6506
TAPE SPEED
ESD14314
SP
LP
R6508
22K
SW6511
SIMUL
ESD14314
ON
OFF
PJ6301
MIC OUT 1
REG 12.3V 2
MIC IN Ⓗ 3
GND (MIC) 4
GND (H.P.) 5
H. P. OUT Lch 6
H. P. OUT Rch 7
GND (FILTER) 8
MIC JACK
J6302
VJJ0138
H. P JACK
J6301
VJJ0096
TO CHASSIS
EARTH
P6502 (TO SYSTEM CTL)
P6003-1 NON SW 12V 1
P6003-2 CASSETTE LED 2
P6003-3 TRACKING VR 3
P6003-4 SLOW TR VR ⊖ 4
P6003-5 SLOW TR VR ⊕ 5
P6003-6 REG 5.1V 6
P6003-7 PICTURE CTL 7
P6003-8 AV Ⓗ 8
P6003-9 AGC Ⓗ 9
P6003-10 EDIT Ⓗ 10
P6003-11 SPⒽ/LPⓂ SW 11
P6003-12 SIMUL Ⓗ 12
P6003-13 LINE Ⓗ 13
P6003-14 TUNER Ⓗ 14
P6503 (TO Hi-Fi AUDIO)
P4503-1 H. P. OUT Lch 1
P4503-2 H. P. OUT Rch 2
P4503-3 MPX FILTER Ⓗ 3
P4503-4 TUNER Ⓗ 4
P6506 (TO S-VHS)
P3405-1 S-VHS/LINE Ⓗ 1
P3405-2 S-VHS SW Ⓗ 2
P3405-3 DETAIL Ⓗ 3
P6505
1 MIC OUT
2 REG 12.3V
3 MIC IN Ⓗ
4 GND (MIC)
5 GND (H.P.)
6 H.P. OUT Lch
7 H.P. OUT Rch
8 GND (FILTER)
P6504 (TO INPUT/OUTPUT)
P4951-1 MIC OUT 1
P4951-2 GND (MIC) 2
P4951-3 MIC IN Ⓗ 3
P4951-4 REG 12.3V 4
C6501
0.022
C6502
0.022
HEADPHONE VR
VR6504 2KC
0
22K
5.0
22K
Q6503
DTC124EA
(EDIT OFF:ON)
5.0
47K
0
47K
QR6501
DTC144EA
(TUNER Ⓗ:ON)
SW6503
TIMER REC
EVQQS307K
D6504
MA165
P6501 (TO TIMER)
1 GND P7501-1
2 P41 P7501-2
3 P51 P7501-3
4 AC METER Ⓗ P7501-4
5 METER Ⓗ P7501-5
6 P7501-6
7 P31 P7501-7
8 P20 P7501-8
9 P53 P7501-9
10 TUNER Ⓛ P7501-10
11 MONO Ⓗ P7501-11

MENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

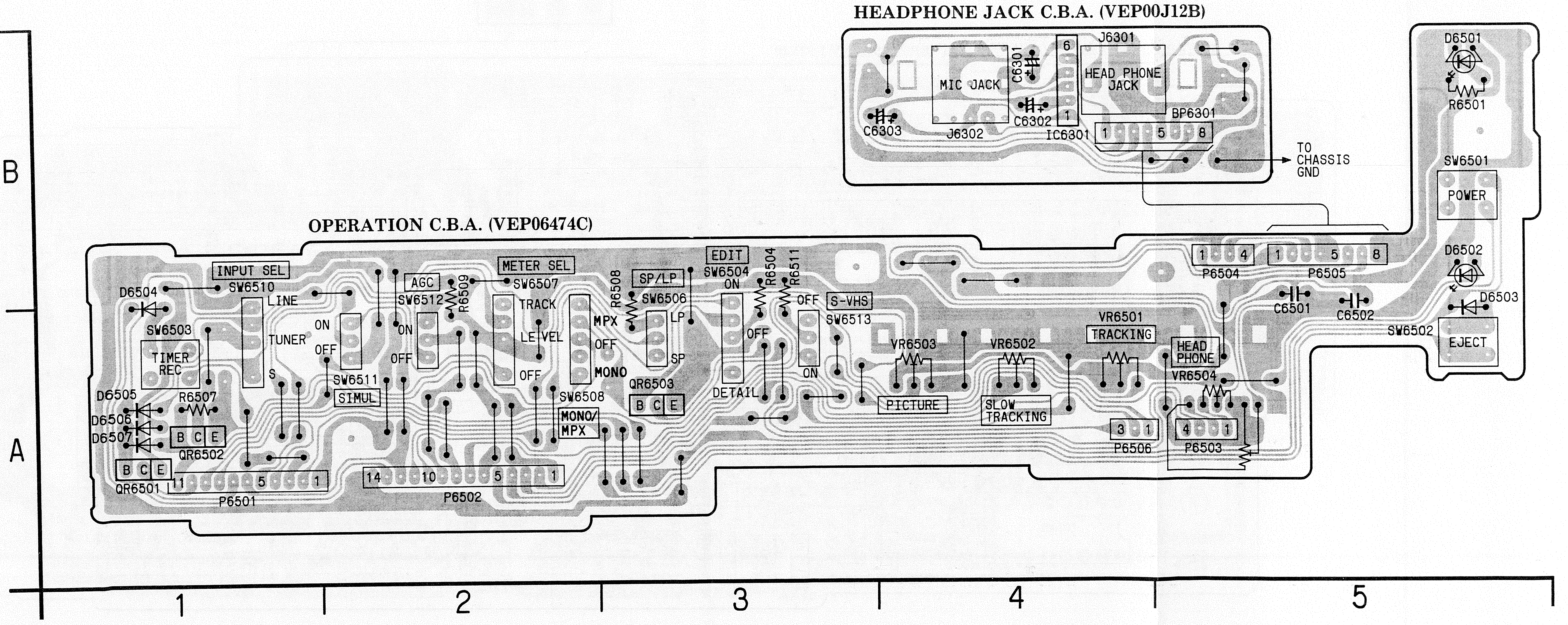
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4 5 6 7 8 9 10 11

3-31. OPERATION C.B.A. (VEP06474C)

OPERATION C.B.A.	
Transistor & Resistor	
QR6501	A-1
QR6502	A-1
QR6503	A-3
Integrated Circuit	
IC6301	B-4
Adjustment	
VR6501	A-4
VR6502	A-4
VR6503	A-4
VR6504	A-5
Connector	
BP6301	B-5
P6501	A-1
P6502	A-2
P6503	A-5
P6504	B-5
P6505	B-5
P6506	A-4

ADDRESS INFORMATION


HEADPHONE JACK C.B.A. (VEP00J12B)
MIC JACK
J6302
C6301
C6302
C6303
IC6301
6
1
J6301
HEAD PHONE JACK
BP6301
1
5
8
TO CHASSIS GND
D6501
R6501
SW6501
POWER
D6502
D6503
SW6502
EJECT
OPERATION C.B.A. (VEP06474C)
INPUT SEL
SW6510
LINE
TUNER
S
D6504
SW6503
TIMER REC
D6505
D6506
D6507
R6507
B C E
QR6502
QR6501
P6501
11
5
1
ON
OFF
SW6511
SIMUL
AGC
SW6512
R6509
ON
OFF
METER SEL
SW6507
TRACK
LEVEL
OFF
SW6508
MONO/MPX
P6502
14
10
5
1
R6508
MPX
OFF
MONO
SP/LP
SW6506
LP
SP
QR6503
B C E
EDIT
SW6504
ON
OFF
DETAIL
R6504
R6511
OFF
S-VHS
SW6513
ON
VR6503
PICTURE
VR6502
SLOW TRACKING
VR6501
TRACKING
HEAD PHONE
VR6504
P6506
3
1
P6503
4
1
P6504
1
4
P6505
1
5
8
C6501
C6502
B
A
1
2
3
4
5

3-32. TIMER C.B.A. (VEP07509C: NV-FS1B) (VEP07509D: NV-FS1EB)

TIMER C.B.A. & IR RECIVER C.B.A.

Transistor	
Q7501	A-3

Transistor & Resistor	
QR7502	A-3
QR7503	A-3
QR7505	C-5
QR7506	C-4
QR7507	B-6
QR7511	A-3

Integrated Circuit	
IC6701	D-4
IC7501	B-2
IC7502	A-2
IC7504	B-1
IC7505	A-3

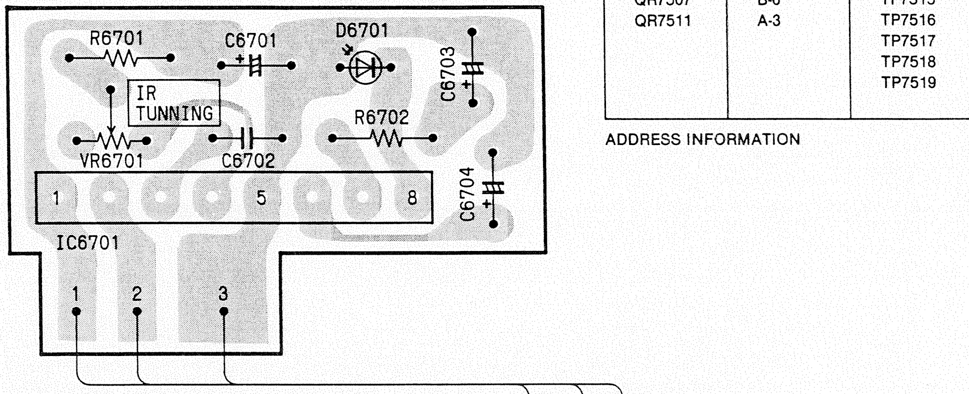
Test Point	
TP7515	B-5
TP7516	A-6
TP7517	C-1
TP7518	C-2
TP7519	C-1

Adjustment	
VR6701	D-4
VR7501	B-6
C7502	B-1

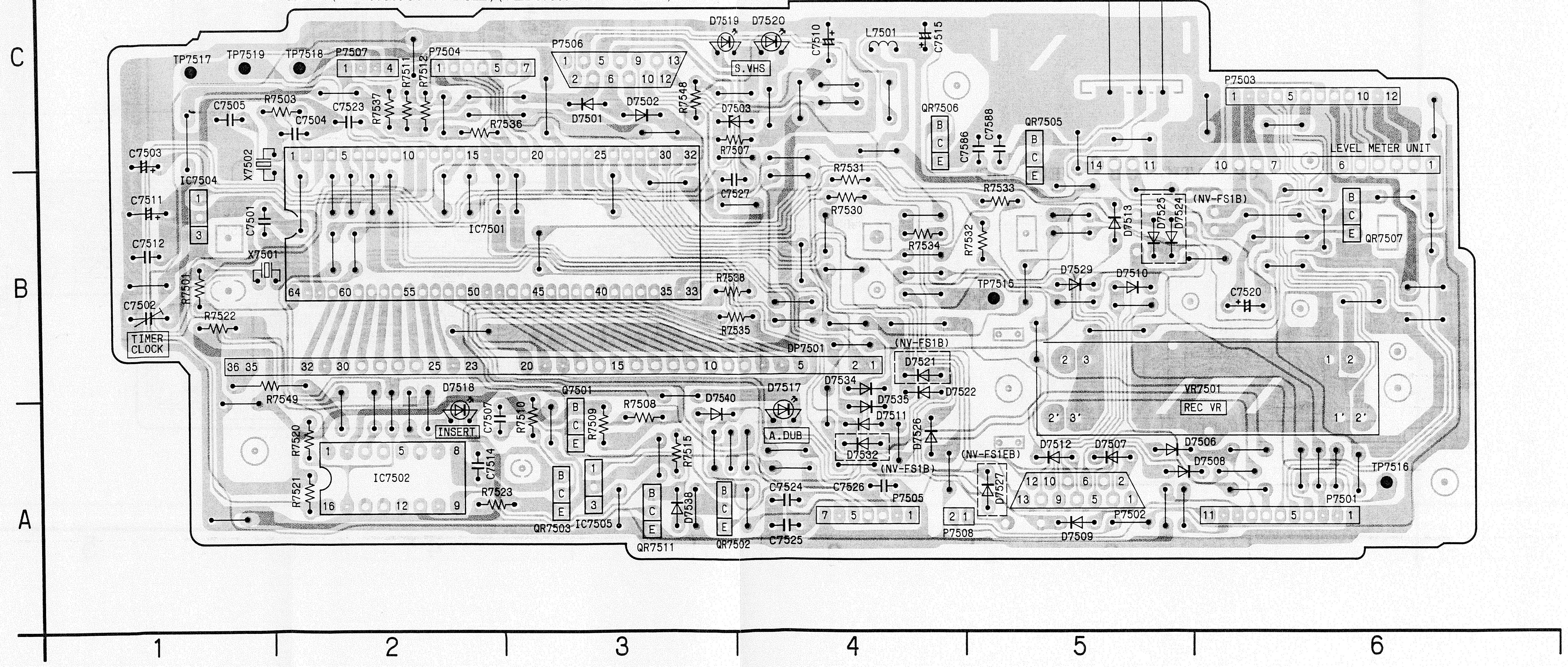
Connector	
P7501	A-6
P7502	A-5
P7503	C-6
P7504	C-2
P7505	A-4
P7506	C-3
P7507	C-2
P7508	A-4

ADDRESS INFORMATION

IR RECEIVER C.B.A. (VEP06380E)

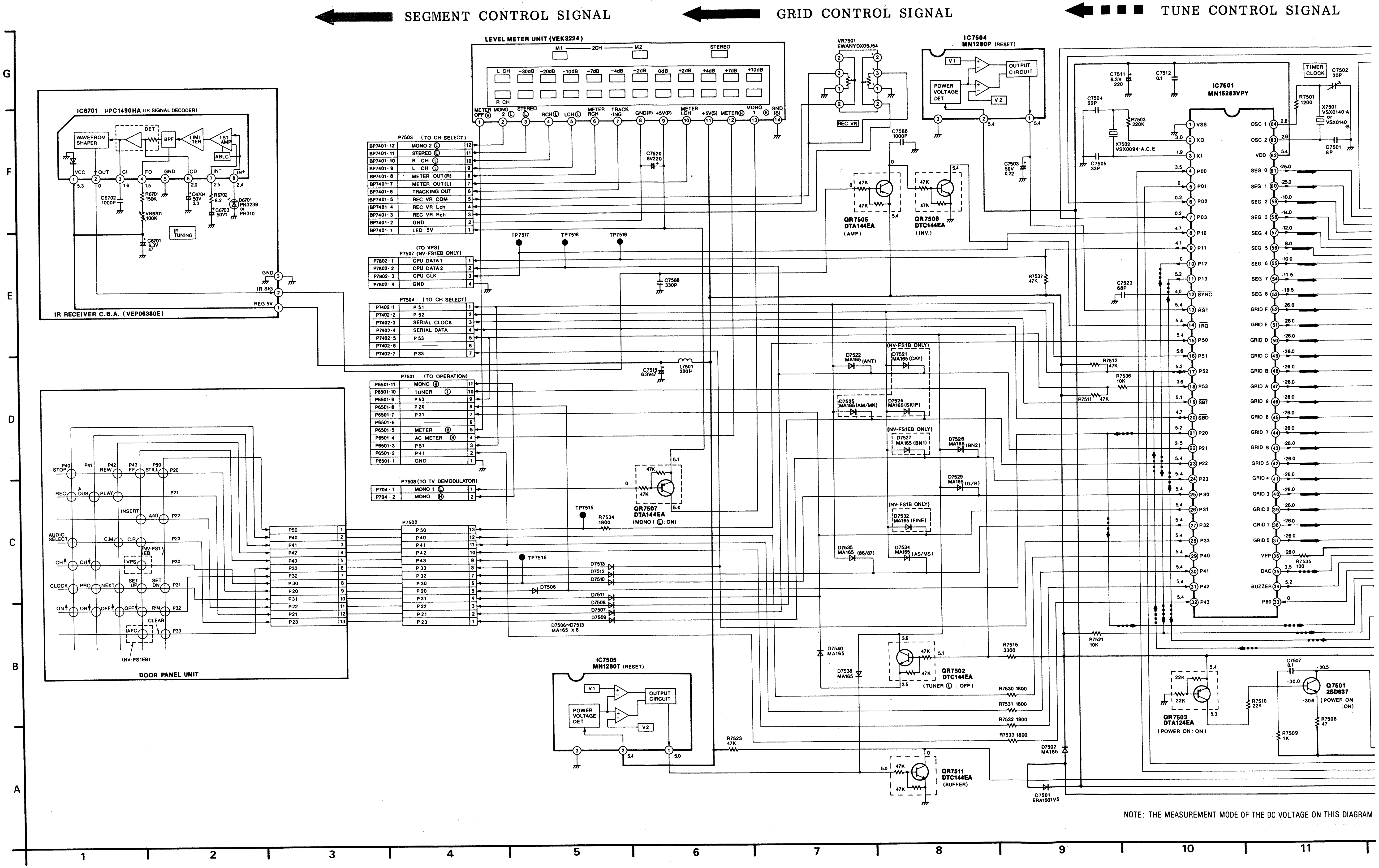

R6701
C6701
D6701
C6703
IR TUNNING
VR6701
C6702
R6702
C6704
IC6701
1
5
8
1 2 3

TIMER C.B.A. (VEP07509C: NV-FS1B) (VEP07509D: NV-FS1EB)


D
C
B
A
1
2
3
4
5
6
TP7517
TP7519
TP7518
P7507
P7504
P7506
D7519
D7520
S.VHS
C7510
L7501
C7515
P7503
C7505
R7503
C7504
C7523
R7537
R7511
R7512
R7536
D7501
D7502
R7548
D7503
R7507
C7527
QR7506
C7586
C7588
QR7505
LEVEL METER UNIT
C7503
IC7504
X7502
IC7501
C7511
C7501
C7512
X7501
R7501
C7502
TIMER CLOCK
R7522
R7531
R7530
R7533
R7534
R7532
D7513
D7525
D7524
(NV-FS1B)
QR7507
R7538
R7535
TP7515
D7529
D7510
C7520
DP7501
(NV-FS1B)
D7521
D7522
R7549
D7518
INSERT
C7507
R7510
Q7501
R7509
R7508
D7540
D7517
A.DUB
D7534
D7535
D7511
D7532
D7526
VR7501
REC VR
R7520
R7521
IC7502
C7514
R7523
R7515
D7538
C7524
C7526
(NV-FS1B)
P7505
(NV-FS1EB)
D7527
D7512
D7507
D7506
D7508
TP7516
P7501
P7502
P7508
D7509
QR7503
IC7505
QR7511
QR7502
C7525

Back Page:
OPERATION Section

3-33. TIMER SCHEMATIC DIAGRAM


SEGMENT CONTROL SIGNAL
GRID CONTROL SIGNAL
TUNE CONTROL SIGNAL
LEVEL METER UNIT (VEK3224)
IC6701 µPC1490HA (IR SIGNAL DECODER)
WAVEFROM SHAPER
DET
BPF
LIMI TER
1ST AMP
ABLC
IR TUNING
IR RECEIVER C.B.A. (VEP06380E)
P7503 (TO CH SELECT)
MONO 2 Ⓛ
STEREO Ⓛ
R CH Ⓛ
L CH Ⓛ
METER OUT(R)
METER OUT(L)
TRACKING OUT
REC VR COM
REC VR Lch
REC VR Rch
GND
LED 5V
(TO VPS) P7507 (NV-FS1EB ONLY)
CPU DATA1
CPU DATA2
CPU CLK
P7504 (TO CH SELECT)
SERIAL CLOCK
SERIAL DATA
P7501 (TO OPERATION)
MONO Ⓗ
TUNER Ⓛ
METER Ⓗ
AC METER Ⓗ
P7508 (TO TV DEMODULATOR)
MONO 1 Ⓛ
DOOR PANEL UNIT
P7502
VR7501 EWANYDX05J54
REC VR
IC7504 MN1280P (RESET)
OUTPUT CIRCUIT
POWER VOLTAGE DET.
QR7505 DTA144EA (AMP)
QR7506 DTC144EA (INV.)
QR7507 DTA144EA (MONO 1 Ⓛ: ON)
QR7502 DTC144EA (TUNER Ⓛ : OFF)
QR7511 DTC144EA (BUFFER)
QR7503 DTA124EA (POWER ON : ON)
Q7501 2SD637 (POWER ON :ON)
IC7505 MN1280T (RESET)
IC7501 MN15283VPY
TIMER CLOCK
X7501 VSX0140-A or VSX0140-B
X7502 VSX0094-A,C,E
D7501 ERA1501V5
D7502 MA165
D7506~D7513 MA165 X 8
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM
G
F
E
D
C
B
A
1
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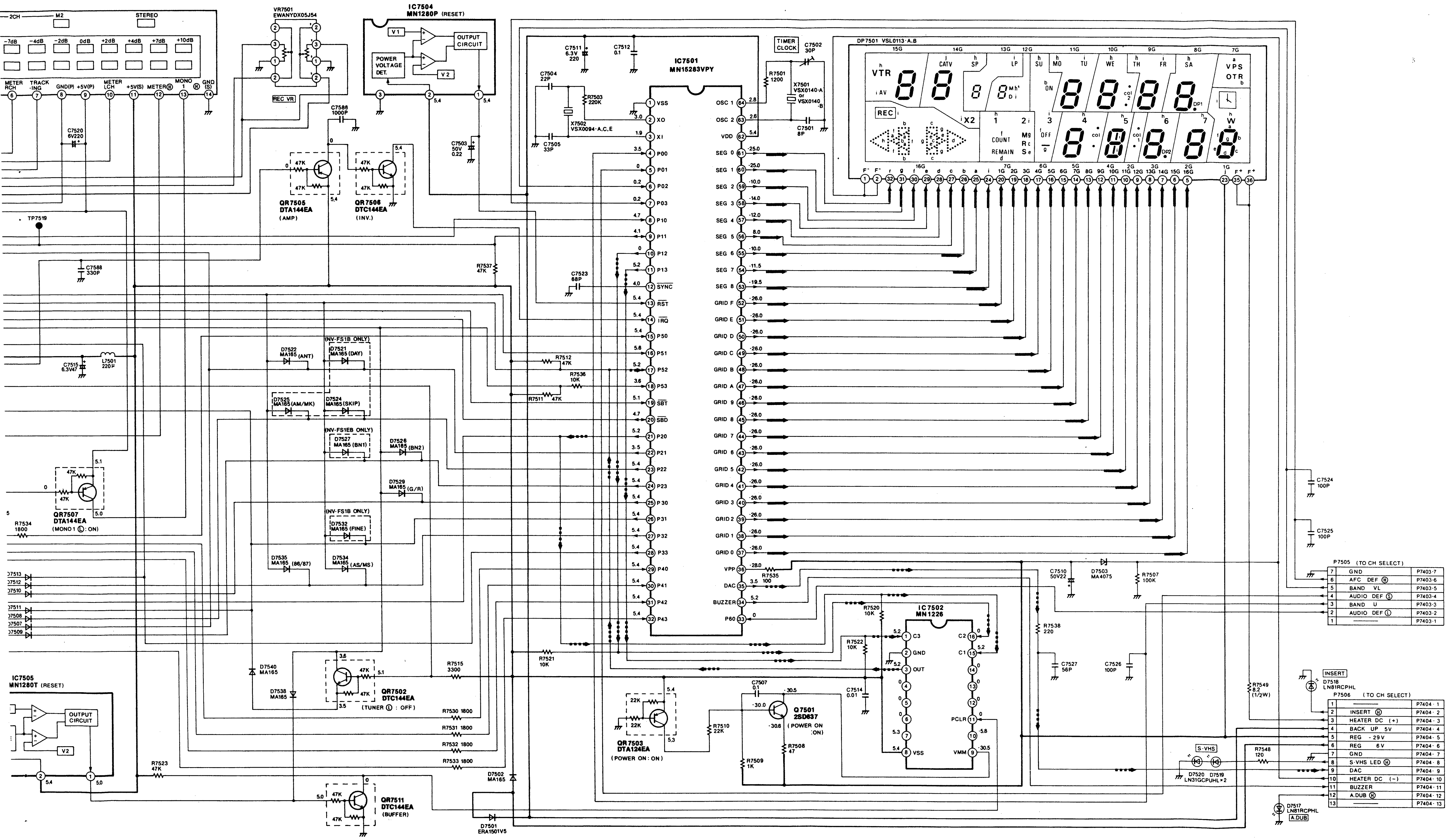
NAL ◀━━ GRID CONTROL SIGNAL ◀■■■ TUNE CONTROL SIGNAL


IC7501
MN15283VPY
IC7502
MN1226
IC7504
MN1280P (RESET)
IC7505
MN1280T (RESET)
VR7501
EWANYDX05J54
REC VR
OUTPUT CIRCUIT
POWER VOLTAGE DET.
TIMER CLOCK
DP7501 VSL0113-A.B
VTR
CATV
SP
LP
REC
COUNT
REMAIN
VPS
OTR
QR7505
DTA144EA
(AMP)
QR7506
DTC144EA
(INV.)
QR7507
DTA144EA
(MONO 1 Ⓛ : ON)
QR7502
DTC144EA
(TUNER Ⓛ : OFF)
QR7503
DTA124EA
(POWER ON : ON)
QR7511
DTC144EA
(BUFFER)
Q7501
2SD637
(POWER ON :ON)
X7501
VSX0140-A
or
VSX0140-B
X7502
VSX0094-A.C.E
D7501
ERA1501V5
D7502
MA165
D7503
MA4075
(NV-FS1B ONLY)
(NV-FS1EB ONLY)
TP7519
P7505 (TO CH SELECT)
7 GND P7403-7
6 AFC DEF Ⓡ P7403-6
5 BAND VL P7403-5
4 AUDIO DEF Ⓢ P7403-4
3 BAND U P7403-3
2 AUDIO DEF Ⓛ P7403-2
1 P7403-1
P7506 (TO CH SELECT)
1 P7404-1
2 INSERT Ⓡ P7404-2
3 HEATER DC (+) P7404-3
4 BACK UP 5V P7404-4
5 REG -29V P7404-5
6 REG 6V P7404-6
7 GND P7404-7
8 S-VHS LED Ⓡ P7404-8
9 DAC P7404-9
10 HEATER DC (-) P7404-10
11 BUZZER P7404-11
12 A.DUB Ⓡ P7404-12
13 P7404-13
INSERT
D7518
LN81RCPHL
S-VHS
D7520 D7519
LN31GCPUHL×2
D7517
LN81RCPHL
A.DUB

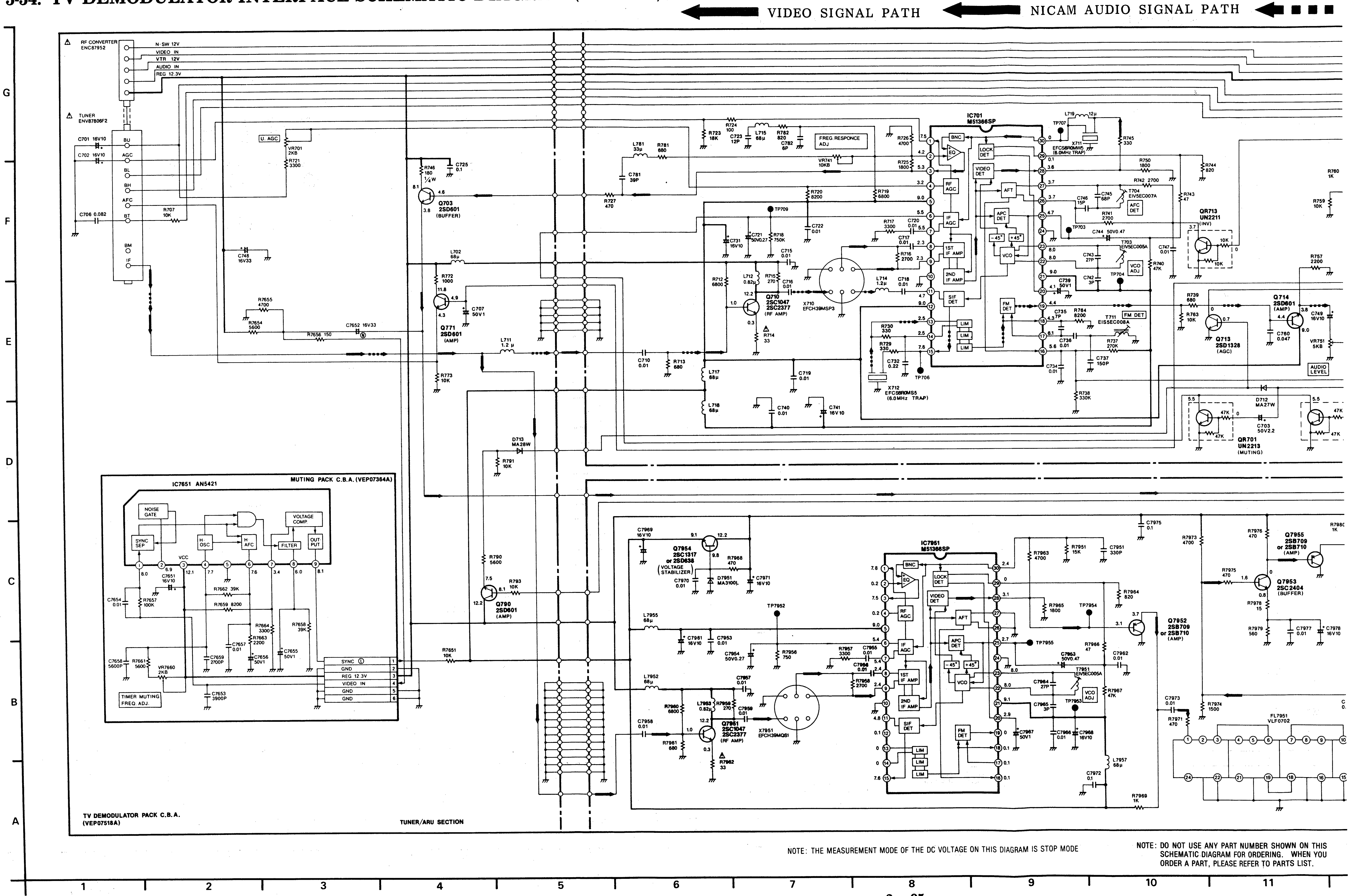
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

6 7 8 9 10 11 12 13 14 15 16

Next Page:
TV DEMODULATOR Section

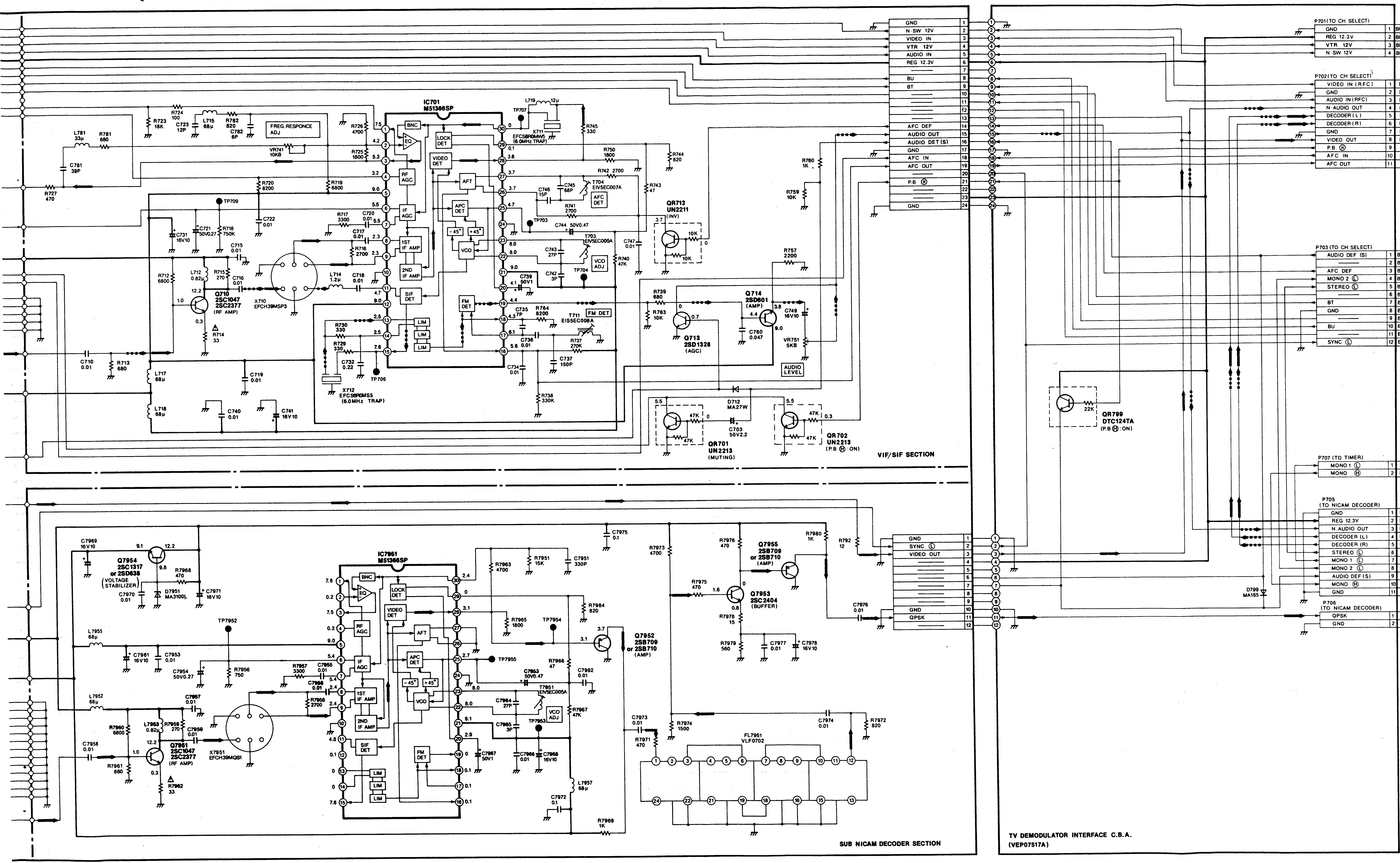
3-34. TV DEMODULATOR INTERFACE SCHEMATIC DIAGRAM (NV-FS1B)


VIDEO SIGNAL PATH
NICAM AUDIO SIGNAL PATH
RF CONVERTER ENC87952
N-SW 12V
VIDEO IN
VTR 12V
AUDIO IN
REG 12.3V
TUNER ENV87806F2
BU
AGC
BL
BH
AFC
BT
BM
IF
U. AGC
VR701 2KB
R721 3300
C701 16V10
C702 16V10
C706 0.082
R707 10K
C748 16V33
R7655 4700
R7654 5600
R7656 150
C7652 16V33
Q703 2SD601 (BUFFER)
R746 180 1/4W
C725 0.1
Q771 2SD601 (AMP)
R772 1000
C707 50V1
L702 68µ
R773 10K
L711 1.2µ
D713 MA28W
R791 10K
R790 5600
R793 10K
Q790 2SD601 (AMP)
R7651 10K
R727 470
L781 33µ
R781 680
C781 39P
C710 0.01
R713 680
L717 68µ
L718 68µ
R723 18K
R724 100
C723 12P
L715 68µ
R782 820
C782 6P
FREQ. RESPONCE ADJ
VR741 10KB
R720 8200
R719 6800
TP709
C731 16V10
C721 50V0.27
R718 750K
C722 0.01
C715 0.01
R712 6800
L712 0.82µ
R715 270
C716 0.01
Q710 2SC1047 2SC2377 (RF AMP)
R714 33
X710 EFCH39MSP3
C719 0.01
C740 0.01
C741 16V10
IC701 M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
IF AGC
AFT
APC DET
-45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
R726 4700
R725 1800
R717 3300
C720 0.01
C717 0.01
R716 2700
L714 1.2µ
C718 0.01
R730 330
R729 330
C732 0.22
TP706
X712 EFCS6R0MS5 (6.0MHz TRAP)
L719 12µ
TP707
X711 EFCS6R0MW5 (6.0MHz TRAP)
R745 330
R750 1800
R742 2700
C746 15P
C745 68P
T704 EIV5EC007A
AFC DET
R741 2700
TP703
C744 50V0.47
T703 EIV5EC005A
C743 27P
C742 3P
TP704
VCO ADJ
C739 50V1
C735 7P
R784 8200
T711 EIS5EC008A
FM DET
C736 0.01
R737 270K
C737 150P
C734 0.01
R738 330K
R740 47K
C747 0.01
R744 820
R743 47
QR713 UN2211 (INV)
10K
R739 680
R763 10K
Q713 2SD1328 (AGC)
Q714 2SD601 (AMP)
C749 16V10
C760 0.047
VR751 5KB
AUDIO LEVEL
R760 1K
R759 10K
R757 2200
D712 MA27W
C703 50V2.2
QR701 UN2213 (MUTING)
47K
IC7651 AN5421
MUTING PACK C.B.A. (VEP07364A)
NOISE GATE
SYNC SEP
H OSC
H AFC
VOLTAGE COMP
FILTER
OUT PUT
VCC
C7651 16V10
C7654 0.01
R7657 100K
R7662 39K
R7659 8200
R7664 3300
R7663 2200
C7657 0.01
C7656 50V1
C7655 50V1
R7658 39K
C7658 5600P
R7661 5600
VR7660 2KB
C7659 2700P
C7653 3900P
TIMER MUTING FREQ. ADJ.
SYNC
GND
REG 12.3V
VIDEO IN
C7969 16V10
Q7954 2SC1317 or 2SD638 (VOLTAGE STABILIZER)
R7968 470
D7951 MA3100L
C7971 16V10
C7970 0.01
TP7952
L7955 68µ
C7961 16V10
C7953 0.01
C7954 50V0.27
R7956 750
L7952 68µ
C7957 0.01
R7960 6800
L7953 0.82µ
R7959 270
C7959 0.01
Q7961 2SC1047 2SC2377 (RF AMP)
X7951 EFCH39MQS1
C7958 0.01
R7961 680
R7962 33
R7957 3300
C7955 0.01
C7956 0.01
R7958 2700
IC7951 M51366SP
R7963 4700
R7951 15K
C7951 330P
C7975 0.1
R7965 1800
TP7954
R7964 820
TP7955
C7963 50V0.47
R7966 47
C7962 0.01
T7951 EIV5EC005A
C7964 27P
C7965 3P
TP7953
R7967 47K
C7967 50V1
C7966 0.01
C7968 16V10
L7957 68µ
C7972 0.1
R7969 1K
Q7952 2SB709 or 2SB710 (AMP)
R7973 4700
R7976 470
Q7955 2SB709 2SB710 (AMP)
R7975 470
Q7953 2SC2404 (BUFFER)
R7978 15
R7979 560
C7977 0.01
C7978 16V10
R7980 1K
C7973 0.01
R7974 1500
R7971 470
FL7951 VLF0702
TV DEMODULATOR PACK C.B.A. (VEP07518A)
TUNER/ARU SECTION
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

VIDEO SIGNAL PATH NICAM AUDIO SIGNAL PATH NORMAL AUDIO SIGNAL PATH


IC701
M51366SP
BNC
EQ
RF AGC
IF AGC
1ST IF AMP
2ND IF AMP
SIF DET
LIM
LOCK DET
VIDEO DET
AFT
APC DET
-45°
+45°
VCO
FM DET
FREQ.RESPONCE ADJ
VR741 10KB
R723 18K
R724 100
C723 12P
L715 68μ
R782 820
C782 6P
L781 33μ
R781 680
C781 39P
R727 470
R726 4700
R725 1800
R720 8200
R719 6800
TP709
C722 0.01
C731 16V10
C721 50V0.27
R718 750K
R717 3300
C720 0.01
C717 0.01
R716 2700
C715 0.01
R712 6800
L712 0.82μ
R715 270
C716 0.01
X710 EFCH39MSP3
L714 1.2μ
C718 0.01
Q710 2SC1047 2SC2377 (RF AMP)
R714 33
C710 0.01
R713 680
L717 68μ
C719 0.01
L718 68μ
C740 0.01
C741 16V10
R730 330
R729 330
C732 0.22
TP706
X712 EFCS6R0MS5 (6.0MHz TRAP)
L719 12μ
TP707
X711 EFCS6R0MW5 (6.0MHz TRAP)
R745 330
R750 1800
R744 820
R742 2700
T704 EIV5EC007A
R743 47
C746 15P
C745 68P
AFC DET
R741 2700
TP703
C744 50V0.47
T703 EIV5EC005A
C747 0.01
C743 27P
VCO ADJ
R740 47K
C742 3P
TP704
C739 50V1
C735 7P
R764 8200
T711 EIS5EC008A
FM DET
C736 0.01
R737 270K
C737 150P
C734 0.01
R738 330K
QR713 UN2211 (INV)
10K
R760 1K
R759 10K
R757 2200
R739 680
R763 10K
Q714 2SD601 (AMP)
C749 16V10
Q713 2SD1328 (AGC)
C760 0.047
VR751 5KB
AUDIO LEVEL
D712 MA27W
C703 50V2.2
QR701 UN2213 (MUTING)
QR702 UN2213 (P.B Ⓗ :ON)
47K
QR799 DTC124TA (P.B Ⓗ :ON)
22K
VIF/SIF SECTION
GND
N-SW 12V
VIDEO IN
VTR 12V
AUDIO IN
REG 12.3V
BU
BT
AFC DEF
AUDIO OUT
AUDIO DET (S)
AFC IN
AFC OUT
P.B Ⓗ
P701 (TO CH SELECT)
BP7301-1
BP7301-2
BP7301-3
BP7301-4
P702 (TO CH SELECT)
VIDEO IN (RFC)
AUDIO IN (RFC)
N-AUDIO OUT
DECODER (L)
DECODER (R)
VIDEO OUT
P7302-1
P7302-11
P703 (TO CH SELECT)
AUDIO DEF (S)
MONO 2 Ⓛ
STEREO Ⓛ
SYNC Ⓛ
BP7303-1
BP7303-12
P707 (TO TIMER)
MONO 1 Ⓛ
MONO Ⓗ
P7508-1
P7508-2
P705 (TO NICAM DECODER)
P706 (TO NICAM DECODER)
QPSK
P7301-1
P7301-2
D799 MA165
IC7951
M51366SP
C7969 16V10
Q7954 2SC1317 or 2SD638 (VOLTAGE STABILIZER)
R7968 470
C7970 0.01
D7951 MA3100L
C7971 16V10
TP7952
L7955 68μ
C7961 16V10
C7953 0.01
C7954 50V0.27
R7956 750
R7957 3300
C7955 0.01
C7956 0.01
R7958 2700
L7952 68μ
C7957 0.01
R7960 6800
L7953 0.82μ
R7959 270
C7959 0.01
Q7951 2SC1047 2SC2377 (RF AMP)
X7951 EFCH39MQS1
C7958 0.01
R7961 680
R7962 33
R7963 4700
R7951 15K
C7951 330P
R7964 820
R7965 1800
TP7954
TP7955
Q7952 2SB709 or 2SB710 (AMP)
R7966 47
C7962 0.01
C7963 50V0.47
T7951 EIV5EC005A
C7964 27P
VCO ADJ
R7967 47K
C7965 3P
TP7953
C7967 50V1
C7966 0.01
C7968 16V10
L7957 68μ
C7972 0.1
R7969 1K
C7975 0.1
R7973 4700
R7976 470
Q7955 2SB709 or 2SB710 (AMP)
R7980 1K
R792 12
R7975 470
Q7953 2SC2404 (BUFFER)
R7978 15
R7979 560
C7977 0.01
C7978 16V10
C7976 0.01
SYNC Ⓛ
C7973 0.01
R7971 470
R7974 1500
FL7951 VLF0702
C7974 0.01
R7972 820
SUB NICAM DECODER SECTION
TV DEMODULATOR INTERFACE C.B.A. (VEP07517A)

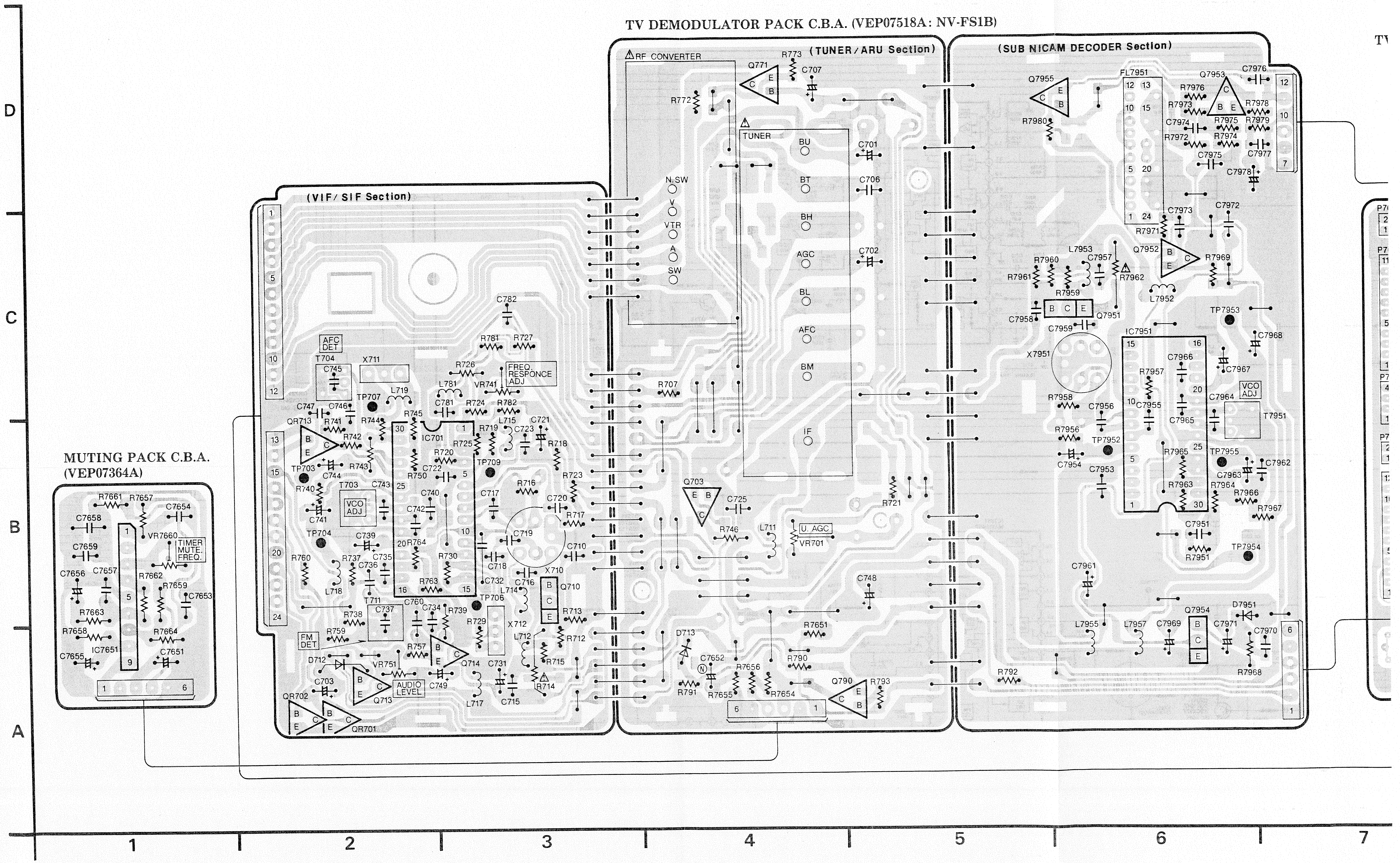
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

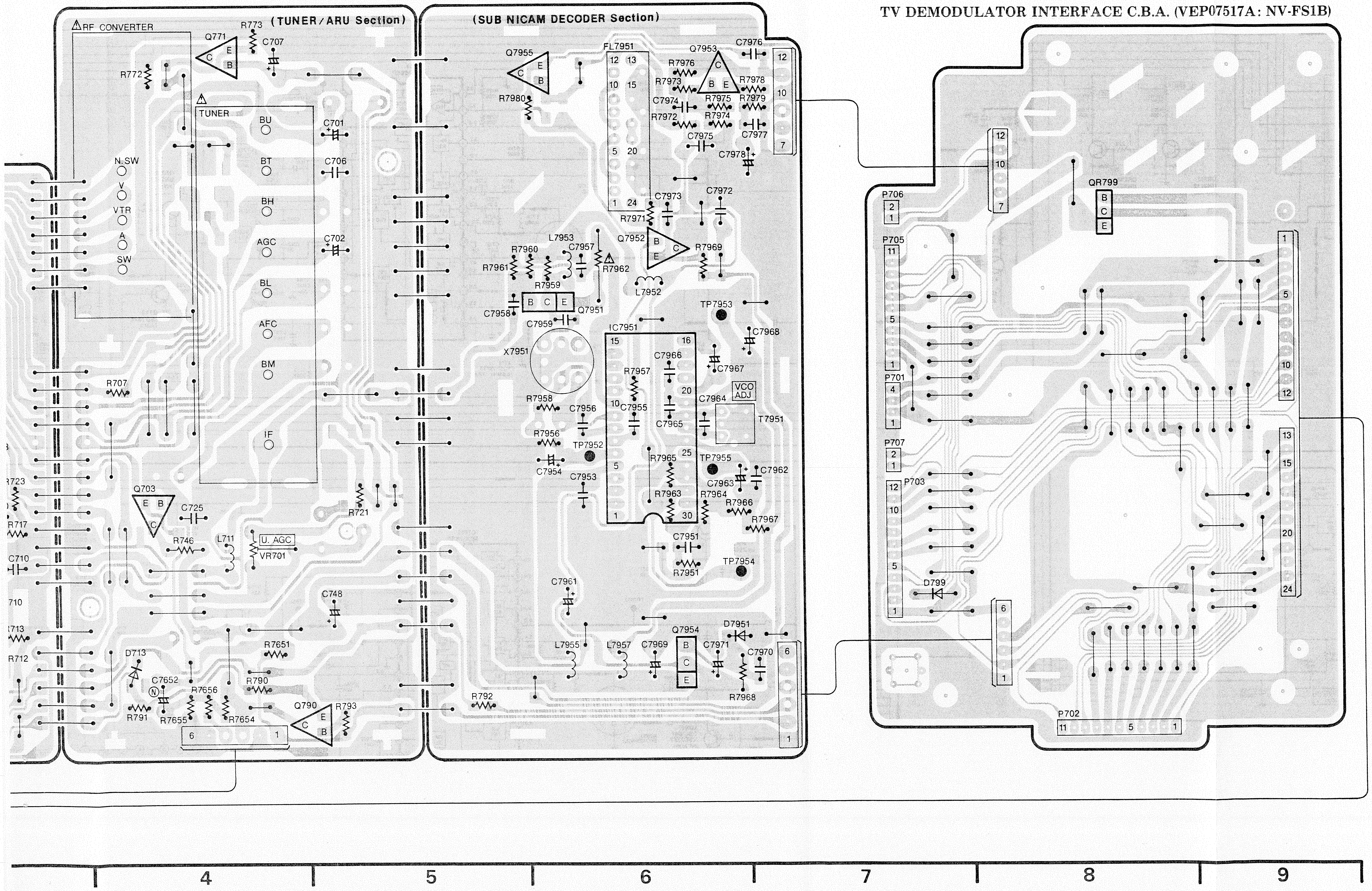
6 7 8 9 10 11 12 13 14 15 16

3-35. TV DEMODULATOR INTERFACE C.B.A. (VEP07517A: NV-FS1B)


TV DEMODULATOR PACK C.B.A. (VEP07518A: NV-FS1B)
(TUNER/ARU Section)
(SUB NICAM DECODER Section)
(VIF/SIF Section)
MUTING PACK C.B.A. (VEP07364A)
RF CONVERTER
TUNER
BU
BT
BH
AGC
BL
AFC
BM
IF
N.SW
V
VTR
A
SW
AFC DET
VCO ADJ
FREQ. RESPONCE ADJ
FM DET
AUDIO LEVEL
U. AGC
TIMER MUTE. FREQ.
IC701
IC7951
IC7651
Q771
Q703
Q710
Q713
Q714
Q790
QR701
QR702
QR713
Q7951
Q7952
Q7953
Q7954
Q7955
VR701
VR741
VR751
VR7660
X711
X712
X710
X7951
FL7951
T703
T704
T711
T7951
TP703
TP704
TP706
TP707
TP709
TP7952
TP7953
TP7954
TP7955
D712
D713
D7951
D
C
B
A
1
2
3
4
5
6
7
TV

TV DEMODULATOR PACK C.B.A. (VEP07518A: NV-FS1B)

TV DEMODULATOR INTERFACE C.B.A. (VEP07517A: NV-FS1B)



(TUNER/ARU Section)
(SUB NICAM DECODER Section)
RF CONVERTER
TUNER
BU
BT
BH
AGC
BL
AFC
BM
IF
N.SW
V
VTR
A
SW
Q771
R773
C707
R772
C701
C706
C702
R707
Q703
C725
R746
L711
U. AGC
VR701
R721
C748
R7651
R790
R7656
R7655
R7654
C7652
D713
R791
Q790
R793
R792
R723
R717
C710
710
R713
R712
Q7955
R7980
FL7951
Q7953
C7976
R7976
R7973
R7978
C7974
R7975
R7979
R7972
R7974
C7977
C7975
C7978
C7973
C7972
R7971
L7953
R7960
C7957
R7961
R7962
R7959
Q7952
R7969
L7952
C7958
Q7951
C7959
TP7953
C7968
IC7951
X7951
C7966
C7967
R7957
VCO ADJ
C7964
R7958
C7956
C7955
C7965
T7951
R7956
TP7952
R7965
TP7955
C7954
C7953
C7963
C7962
R7963
R7964
R7966
R7967
C7951
R7951
TP7954
C7961
D7951
Q7954
L7955
L7957
C7969
C7971
C7970
R7968
QR799
P706
P705
P701
P707
P703
D799
P702
4
5
6
7
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9

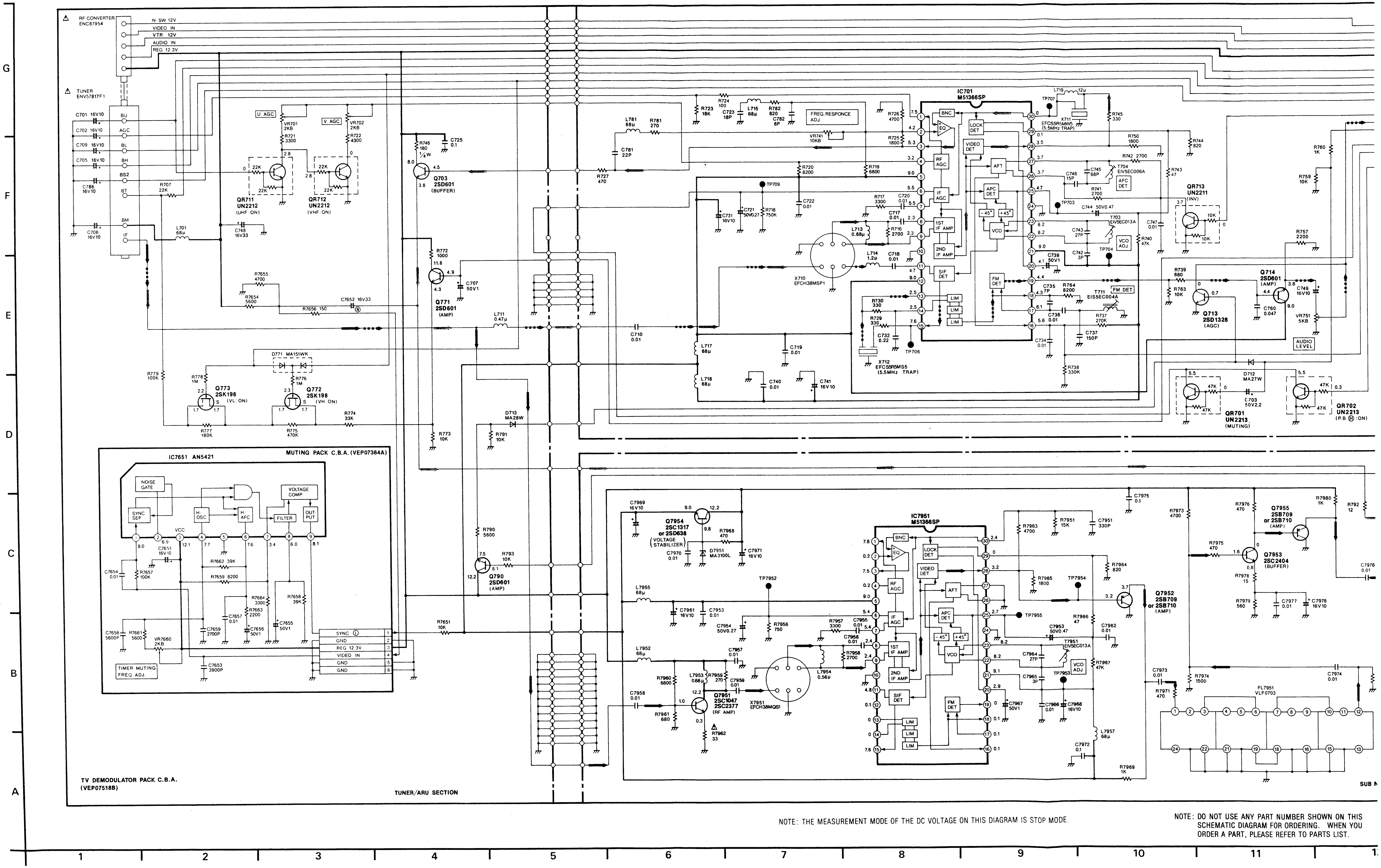
TV DEMODULATOR INTERFACE C.B.A. (NV-FS1B)	
Transistor	
Q703	B-4
Q710	B-3
Q713	A-2
Q714	A-3
Q771	D-4
Q790	A-5
Q7951	C-6
Q7952	C-6
Q7953	D-6
Q7954	B-6
Q7955	D-6
Transistor & Resistor	
QR701	A-2
QR702	A-2
QR713	B-2
QR799	C-8
Integrated Circuit	
IC701	B-3
IC7651	B-1
IC7951	C-6
Test Point	
TP703	B-2
TP704	B-2
TP706	B-3
TP707	C-2
TP709	B-3
TP7952	B-6
TP7953	C-6
TP7954	B-6
TP7955	B-6
Adjustment	
T703	B-2
T704	C-2
T711	A-2
T7951	B-7
VR701	B-4
VR741	C-3
VR751	A-2
VR7660	B-1
Connector	
P701	C-7
P702	A-8
P703	B-7
P705	C-7
P706	C-7
P707	B-7

ADDRESS INFORMATION

Next Page:
TV DEMODULATOR Section

3-36. TV DEMODULATOR INTERFACE SCHEMATIC DIAGRAM (NV-FS1EB)

VIDEO SIGNAL PATH NICAM AUDIO SIGNAL PATH NORMA


RF CONVERTER ENC87954
N-SW 12V
VIDEO IN
VTR 12V
AUDIO IN
REG 12.3V
TUNER ENV57817F1
BU
AGC
BL
BH
BS2
BT
BM
IF
QR711 UN2212 (UHF ON)
QR712 UN2212 (VHF ON)
U. AGC
V. AGC
Q703 2SD601 (BUFFER)
Q771 2SD601 (AMP)
Q773 2SK198 (VL ON)
Q772 2SK198 (VH ON)
D771 MA151WK
D713 MA28W
IC701 M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
1ST IF AMP
2ND IF AMP
VCO
SIF DET
FM DET
LIM
FREQ RESPONCE ADJ
X710 EFCH38MSP1
X711 EFCS5R5MW5 (5.5MHz TRAP)
X712 EFCS5R5MS5 (5.5MHz TRAP)
T703 EIV5EC013A
T704 EIV5EC006A
T711 EIS5EC004A
FM DET
AFC DET
VCO ADJ
QR713 UN2211 (INV)
Q713 2SD1328 (AGC)
Q714 2SD601 (AMP)
VR751 5KB AUDIO LEVEL
D712 MA27W
QR701 UN2213 (MUTING)
QR702 UN2213 (P.B Ⓗ ON)
IC7651 AN5421
MUTING PACK C.B.A. (VEP07364A)
NOISE GATE
SYNC SEP
H-OSC
H-AFC
VOLTAGE COMP
FILTER
OUT PUT
VCC
SYNC Ⓘ
GND
REG 12.3V
VIDEO IN
GND
GND
TIMER MUTING FREQ. ADJ.
Q790 2SD601 (AMP)
Q7954 2SC1317 or 2SD638 (VOLTAGE STABILIZER)
D7951 MA3100L
IC7951 M51366SP
Q7951 2SC1047 2SC2377 (RF AMP)
X7951 EFCH38MQS1
T7951 EIV5EC013A
TP7952
TP7954
TP7955
TP7953
Q7952 2SB709 or 2SB710 (AMP)
Q7955 2SB709 or 2SB710 (AMP)
Q7953 2SC2404 (BUFFER)
FL7951 VLF0703
TV DEMODULATOR PACK C.B.A. (VEP07518B)
TUNER/ARU SECTION
SUB N
G
F
E
D
C
B
A
1
2
3
4
5
6
7
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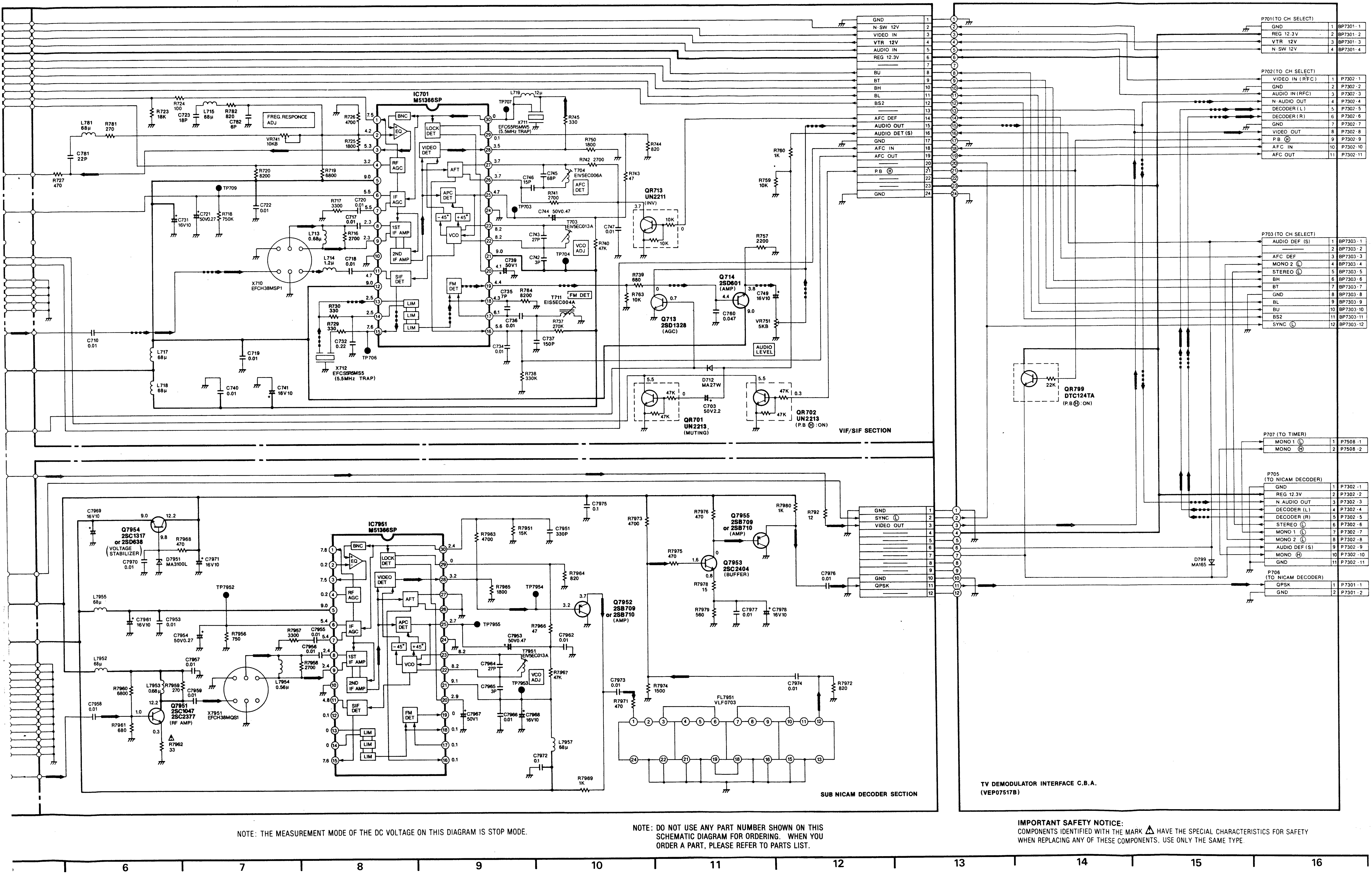
10
11
1

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

(NV-FS1EB)

VIDEO SIGNAL PATH NICAM AUDIO SIGNAL PATH NORMAL AUDIO SIGNAL PATH

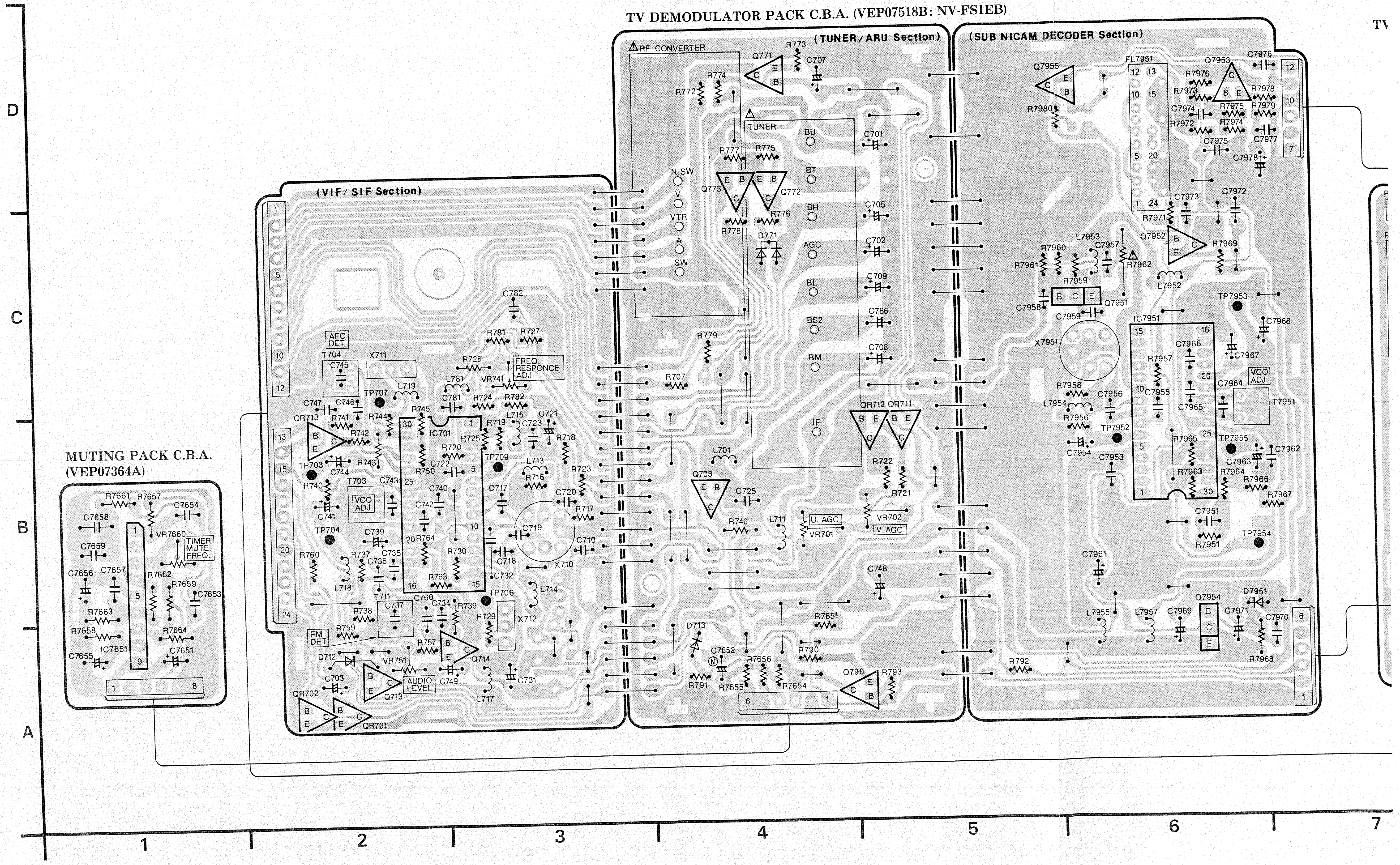

IC701
M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
-45°
+45°
1ST IF AMP
VCO
2ND IF AMP
SIF DET
FM DET
LIM
FREQ. RESPONCE ADJ
VR741 10KB
X710 EFCH38MSP1
X711 EFC55R5MW5 (5.5MHz TRAP)
X712 EFC55R5MS5 (5.5MHz TRAP)
T703 EIV5EC013A
T704 EIV5EC006A
T711 EI55EC004A
AFC DET
VCO ADJ
FM DET
QR713 UN2211 (INV)
Q714 2SD601 (AMP)
Q713 2SD1328 (AGC)
VR751 5KB
AUDIO LEVEL
D712 MA27W
QR701 UN2213 (MUTING)
QR702 UN2213 (P.B Ⓗ:ON)
QR799 DTC124TA (P.B Ⓗ:ON)
VIF/SIF SECTION
TP703
TP704
TP706
TP707
TP709
GND
N-SW 12V
VIDEO IN
VTR 12V
AUDIO IN
REG 12.3V
BU
BT
BH
BL
BS2
AFC DEF
AUDIO OUT
AUDIO DET (S)
AFC IN
AFC OUT
P.B Ⓗ
P701 (TO CH SELECT)
P702 (TO CH SELECT)
P703 (TO CH SELECT)
P707 (TO TIMER)
P705 (TO NICAM DECODER)
P706 (TO NICAM DECODER)
VIDEO IN (RFC)
AUDIO IN (RFC)
N-AUDIO OUT
DECODER (L)
DECODER (R)
VIDEO OUT
AUDIO DEF (S)
MONO 2 Ⓛ
STEREO Ⓛ
SYNC Ⓛ
MONO 1 Ⓛ
MONO Ⓗ
QPSK
IC7951
M51366SP
Q7954 2SC1317 or 2SD638 (VOLTAGE STABILIZER)
D7951 MA3100L
Q7951 2SC1047 2SC2377 (RF AMP)
X7951 EFCH38MQS1
T7951 EIV5EC013A
TP7952
TP7953
TP7954
TP7955
Q7952 2SB709 or 2SB710 (AMP)
Q7955 2SB709 or 2SB710 (AMP)
Q7953 2SC2404 (BUFFER)
FL7951 VLF0703
D799 MA165
SUB NICAM DECODER SECTION
TV DEMODULATOR INTERFACE C.B.A. (VEP07517B)
6
7
8
9
10
11
12
13
14
15
16

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

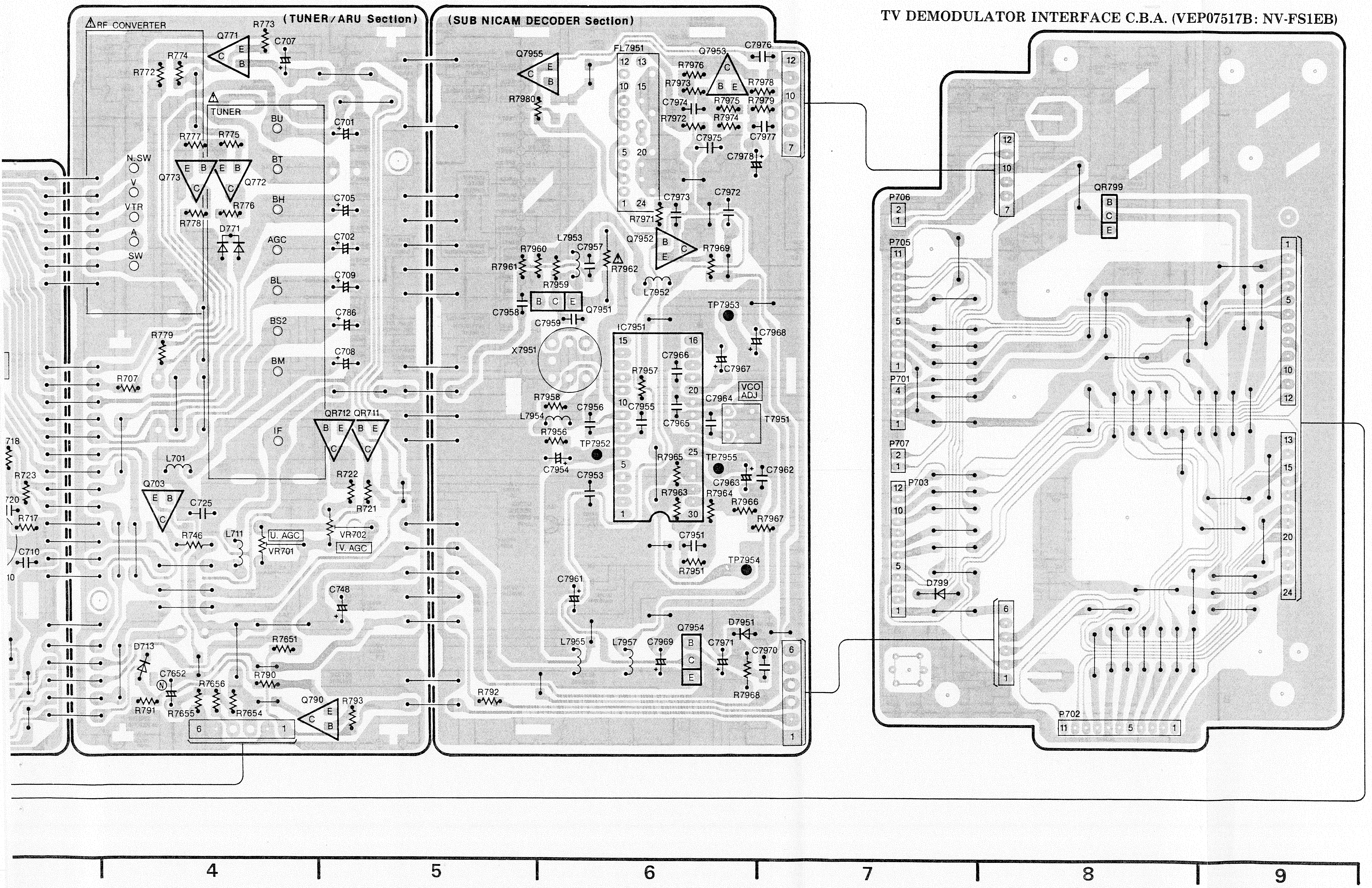
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

3-37. TV DEMODULATOR INTERFACE C.B.A. (VEP07517B: NV-FS1EB)


TV DEMODULATOR PACK C.B.A. (VEP07518B: NV-FS1EB)
(TUNER/ARU Section)
(SUB NICAM DECODER Section)
(VIF/SIF Section)
MUTING PACK C.B.A. (VEP07364A)
TV
RF CONVERTER
TUNER
N.SW
V
VTR
A
SW
BU
BT
BH
AGC
BL
BS2
BM
IF
AFC DET
FREQ. RESPONCE ADJ
VCO ADJ
FM DET
AUDIO LEVEL
U. AGC
V. AGC
TIMER MUTE. FREQ.
IC701
IC7951
IC7651
FL7951
X711
X710
X712
X7951
T704
T703
T711
T7951
Q771
Q772
Q773
Q703
Q713
Q714
Q790
QR701
QR702
QR711
QR712
QR713
Q7951
Q7952
Q7953
Q7954
Q7955
D712
D713
D771
D7951
VR741
VR751
VR701
VR702
VR7660
TP703
TP704
TP706
TP707
TP709
TP7952
TP7953
TP7954
TP7955
D
C
B
A
1
2
3
4
5
6
7

TV DEMODULATOR PACK C.B.A. (VEP07518B: NV-FS1EB)

TV DEMODULATOR INTERFACE C.B.A. (VEP07517B: NV-FS1EB)


(TUNER/ARU Section)
(SUB NICAM DECODER Section)
⚠RF CONVERTER
⚠TUNER
Q771
Q772
Q773
Q703
Q790
QR711
QR712
R772
R773
R774
R775
R776
R777
R778
R779
R707
R717
R721
R722
R723
R746
R790
R791
R792
R793
R7651
R7654
R7655
R7656
C701
C702
C705
C707
C708
C709
C710
C725
C748
C786
C7652
D713
D771
L701
L711
VR701
VR702
U. AGC
V. AGC
N.SW
V
VTR
A
SW
BU
BT
BH
AGC
BL
BS2
BM
IF
Q7951
Q7952
Q7953
Q7954
Q7955
FL7951
IC7951
X7951
T7951
VCO ADJ
TP7952
TP7953
TP7954
TP7955
R7951
R7956
R7957
R7958
R7959
R7960
R7961
R7962
R7963
R7964
R7965
R7966
R7967
R7968
R7969
R7971
R7972
R7973
R7974
R7975
R7976
R7978
R7979
R7980
C7951
C7953
C7954
C7955
C7956
C7957
C7958
C7959
C7961
C7962
C7963
C7964
C7965
C7966
C7967
C7968
C7969
C7970
C7971
C7972
C7973
C7974
C7975
C7976
C7977
C7978
L7952
L7953
L7954
L7955
L7957
D7951
QR799
D799
P701
P702
P703
P705
P706
P707
4
5
6
7
8
9

TV DEMODULATOR INTERFACE C.B.A. (NV-FS1EB)	
Transistor	
Q703	B-4
Q713	A-2
Q714	A-3
Q771	D-4
Q772	D-4
Q773	D-4
Q790	A-5
Q7951	C-6
Q7952	C-6
Q7953	D-6
Q7954	B-6
Q7955	D-6
Transistor & Resistor	
QR701	A-2
QR702	A-2
QR711	B-5
QR712	B-5
QR713	B-2
QR799	C-8
Integrated Circuit	
IC701	B-3
IC7651	B-1
IC7951	C-6
Test Point	
TP703	B-2
TP704	B-2
TP706	B-3
TP707	C-2
TP709	B-3
TP7952	B-6
TP7953	C-6
TP7954	B-6
TP7955	B-6
Adjustment	
T703	B-2
T704	C-2
T711	A-2
T7951	B-7
VR701	B-4
VR702	B-5
VR741	C-3
VR751	A-2
VR7660	B-1
Connector	
P701	C-7
P702	A-8
P703	B-7
P705	C-7
P706	C-7
P707	B-7

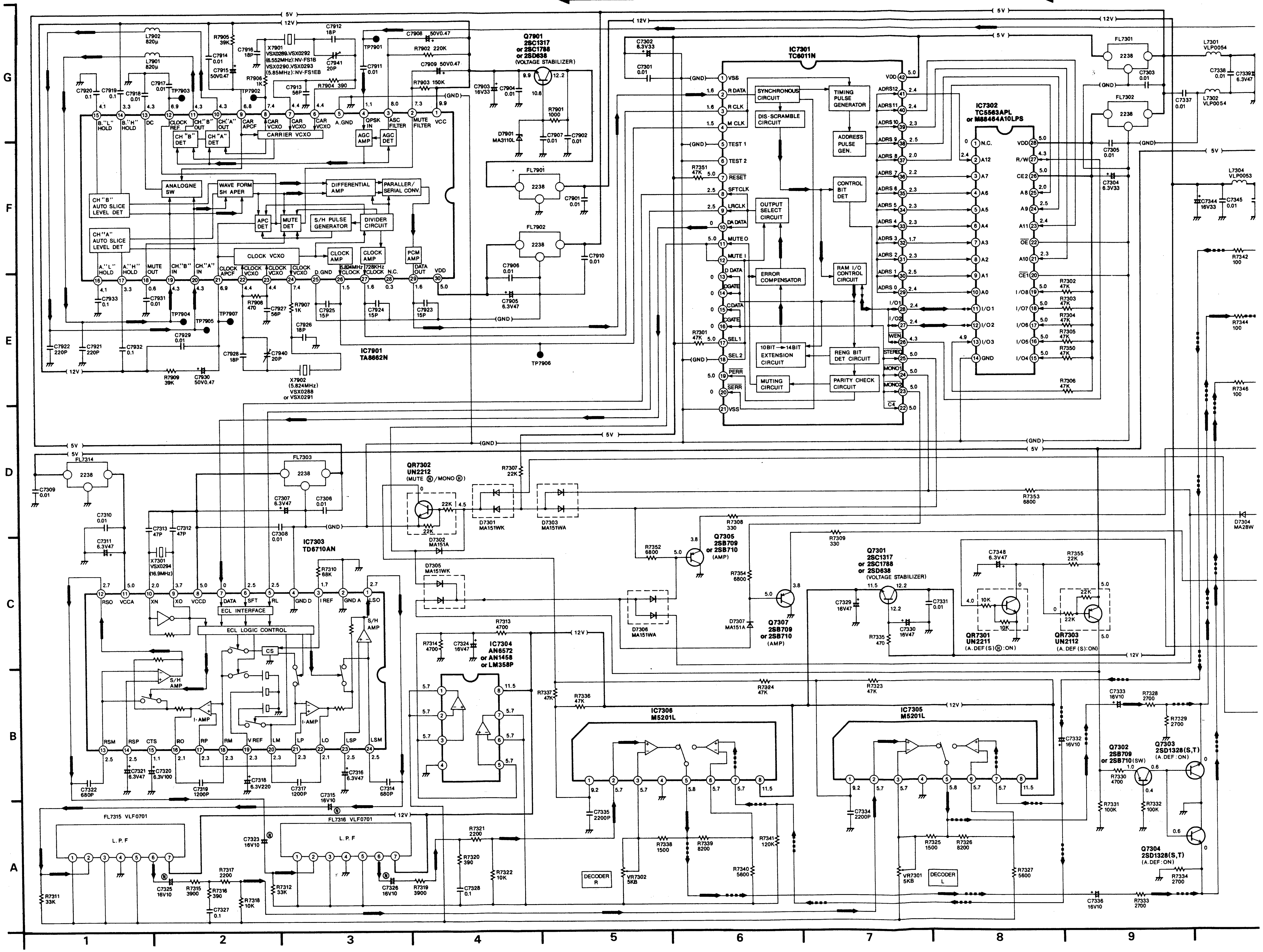
ADDRESS INFORMATION

Next Page:
NICAM DECODER Section

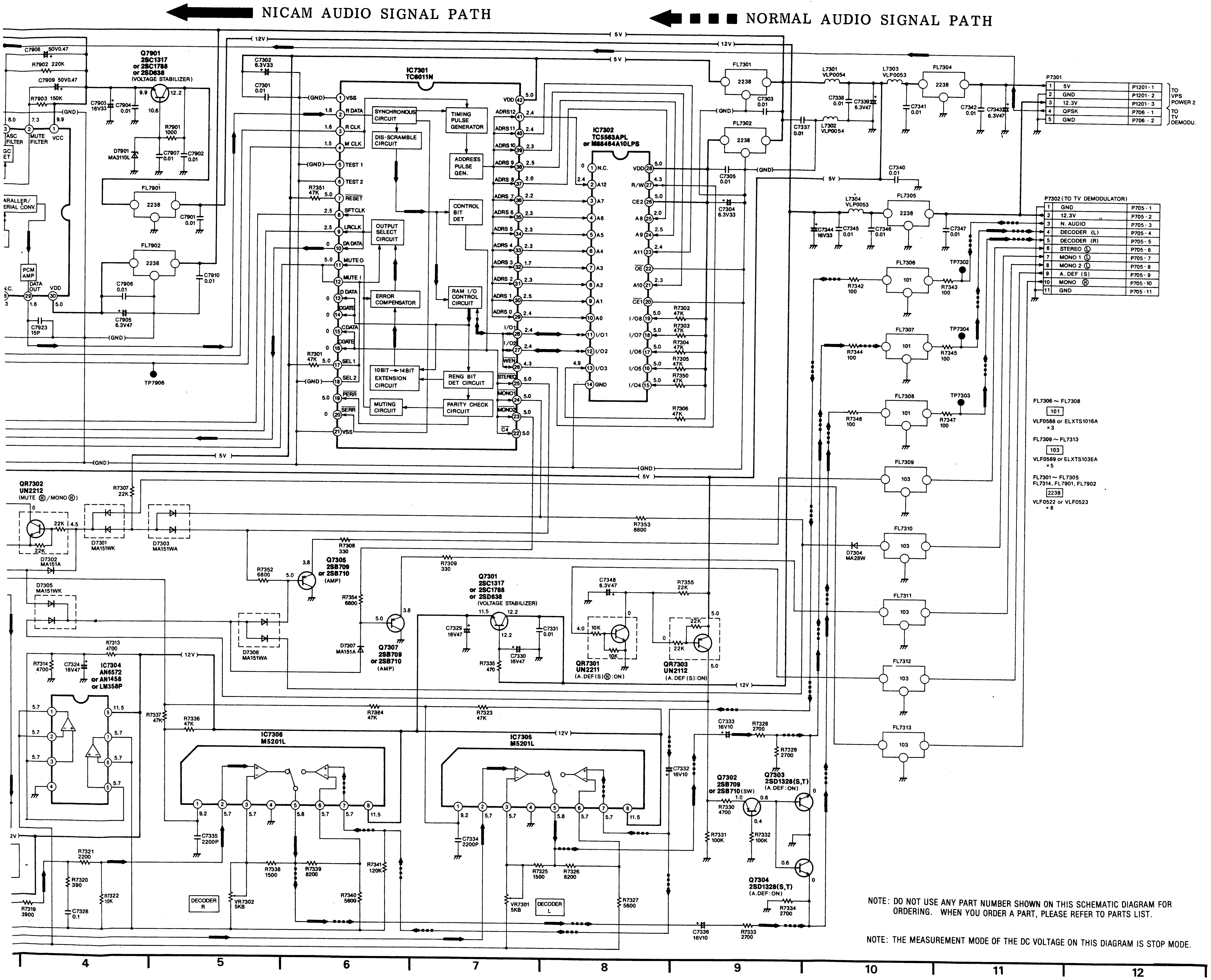
3-38. NICAM DECODER SCHEMATIC DIAGRAM

NICAM AUDIO SIGNAL PATH

■ ■ ■ NORMAL AUDIO


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
IC7901
TA8662N
Q7901
2SC1317
or 2SC1788
or 2SD638
(VOLTAGE STABILIZER)
IC7301
TC6011N
IC7302
TC5563APL
or M58464A10LPS
IC7303
TD6710AN
IC7304
AN6572
or AN1458
or LM358P
IC7306
M5201L
IC7305
M5201L
QR7302
UN2212
(MUTE Ⓗ / MONO Ⓗ)
Q7305
2SB709
or 2SB710
(AMP)
Q7307
2SB709
or 2SB710
(AMP)
Q7301
2SC1317
or 2SC1788
or 2SD638
(VOLTAGE STABILIZER)
QR7301
UN2211
(A.DEF (S) Ⓗ :ON)
QR7303
UN2112
(A.DEF (S):ON)
Q7302
2SB709
or 2SB710 (SW)
Q7303
2SD1328(S,T)
(A.DEF :ON)
Q7304
2SD1328(S,T)
(A.DEF :ON)
FL7901
FL7902
FL7301
FL7302
FL7303
FL7314
FL7315 VLF0701
FL7316 VLF0701
L.P.F
X7901
X7902
(5.824MHz)
X7301
VSX0294
(16.9MHz)
ANALOGNE SW
WAVE FORM SH APER
DIFFERENTIAL AMP
PARALLER/ SERIAL CONV.
CH "B" AUTO SLICE LEVEL DET
CH "A" AUTO SLICE LEVEL DET
APC DET
MUTE DET
S/H PULSE GENERATOR
DIVIDER CIRCUIT
CLOCK VCXO
CLOCK AMP
PCM AMP
CARRIER VCXO
AGC AMP
AGC DET
SYNCHRONOUS CIRCUIT
DIS-SCRAMBLE CIRCUIT
TIMING PULSE GENERATOR
ADDRESS PULSE GEN.
CONTROL BIT DET
OUTPUT SELECT CIRCUIT
ERROR COMPENSATOR
RAM I/O CONTROL CIRCUIT
10BIT→14BIT EXTENSION CIRCUIT
RENG BIT DET CIRCUIT
MUTING CIRCUIT
PARITY CHECK CIRCUIT
ECL INTERFACE
ECL LOGIC CONTROL
S/H AMP
I-AMP
DECODER R
DECODER L
D7301 MA151WK
D7303 MA151WA
D7302 MA151A
D7305 MA151WK
D7306 MA151WA
D7307 MA151A
D7304 MA28W
TP7901
TP7902
TP7903
TP7904
TP7905
TP7906
TP7907
5V
12V
(GND)

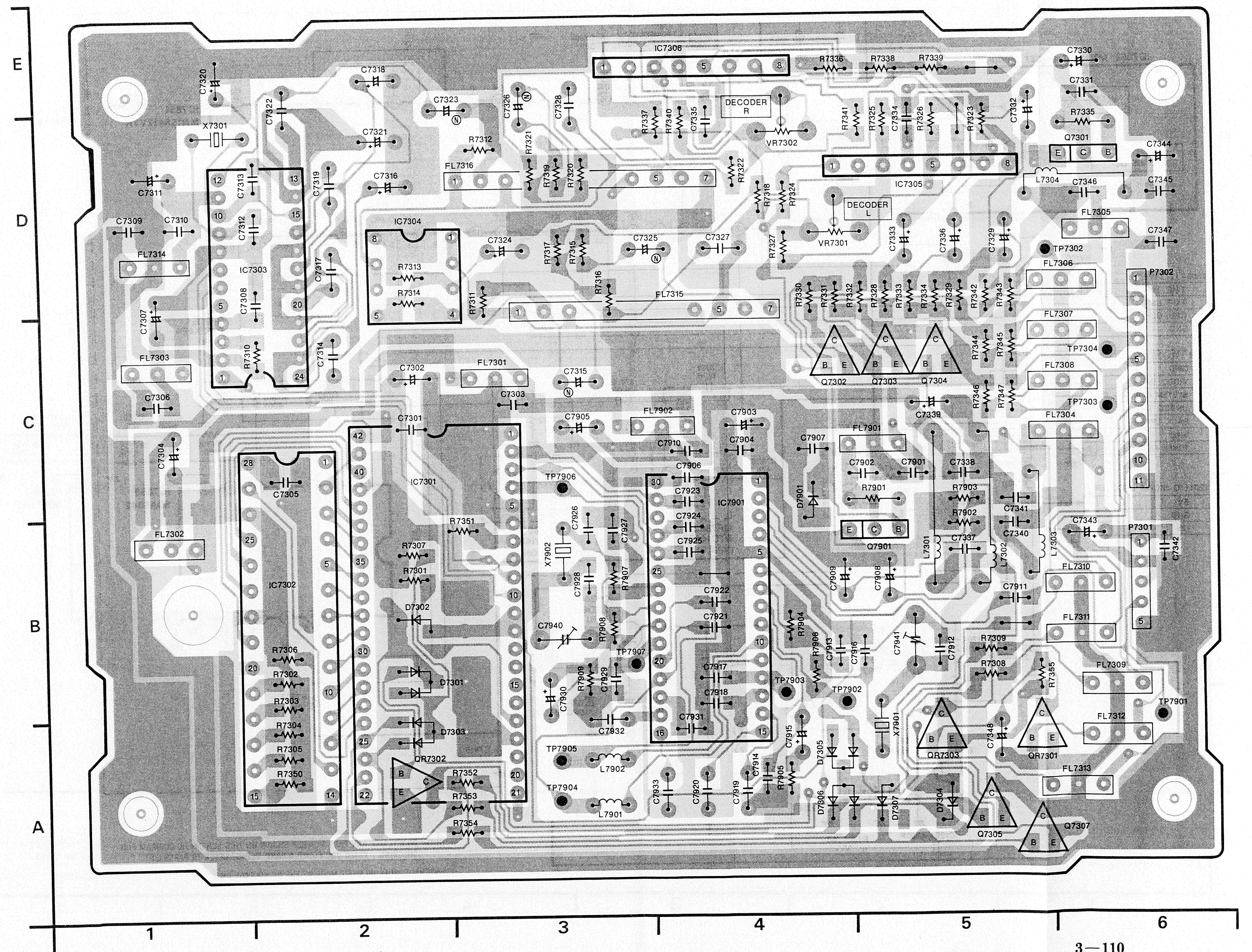
AGRAM


NICAM AUDIO SIGNAL PATH
NORMAL AUDIO SIGNAL PATH
IC7301 TC6011N
SYNCHRONOUS CIRCUIT
DIS-SCRAMBLE CIRCUIT
TIMING PULSE GENERATOR
ADDRESS PULSE GEN.
CONTROL BIT DET
OUTPUT SELECT CIRCUIT
ERROR COMPENSATOR
RAM I/O CONTROL CIRCUIT
10BIT→14BIT EXTENSION CIRCUIT
RENG BIT DET CIRCUIT
MUTING CIRCUIT
PARITY CHECK CIRCUIT
IC7302 TC5563APL or M58464A10LPS
Q7901 2SC1317 or 2SC1788 or 2SD638 (VOLTAGE STABILIZER)
D7901 MA3110L
FL7901 2238
FL7902 2238
TP7906
FL7301 2238
FL7302 2238
FL7304 2238
FL7305 2238
L7301 VLP0054
L7302 VLP0054
L7303 VLP0053
L7304 VLP0053
FL7306 101
FL7307 101
FL7308 101
FL7309 103
FL7310 103
FL7311 103
FL7312 103
FL7313 103
TP7302
TP7304
TP7303
D7304 MA28W
P7301
1 5V P1201-1
2 GND P1201-2
3 12.3V P1201-3
4 QPSK P706-1
5 GND P706-2
TO VPS POWER 2
TO TV DEMODU.
P7302 (TO TV DEMODULATOR)
1 GND P705-1
2 12.3V P705-2
3 N. AUDIO P705-3
4 DECODER (L) P705-4
5 DECODER (R) P705-5
6 STEREO Ⓛ P705-6
7 MONO 1 Ⓛ P705-7
8 MONO 2 Ⓛ P705-8
9 A. DEF (S) P705-9
10 MONO Ⓗ P705-10
11 GND P705-11
FL7306 ~ FL7308
101
VLF0568 or ELXTS1016A
× 3
FL7309 ~ FL7313
103
VLF0569 or ELXTS103EA
× 5
FL7301 ~ FL7305
FL7314, FL7901, FL7902
2238
VLF0522 or VLF0523
× 8
QR7302 UN2212 (MUTE Ⓗ / MONO Ⓗ)
D7301 MA151WK
D7303 MA151WA
D7302 MA151A
D7305 MA151WK
D7306 MA151WA
D7307 MA151A
Q7305 2SB709 or 2SB710 (AMP)
Q7307 2SB709 or 2SB710 (AMP)
Q7301 2SC1317 or 2SC1788 or 2SD638 (VOLTAGE STABILIZER)
QR7301 UN2211 (A.DEF(S)Ⓗ:ON)
QR7303 UN2112 (A.DEF (S):ON)
IC7304 AN6572 or AN1458 or LM358P
IC7306 M5201L
IC7305 M5201L
DECODER R
DECODER L
VR7302 5KB
VR7301 5KB
Q7302 2SB709 or 2SB710 (SW)
Q7303 2SD1328(S,T) (A.DEF:ON)
Q7304 2SD1328(S,T) (A.DEF:ON)
4
5
6
7
8
9
10
11
12

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

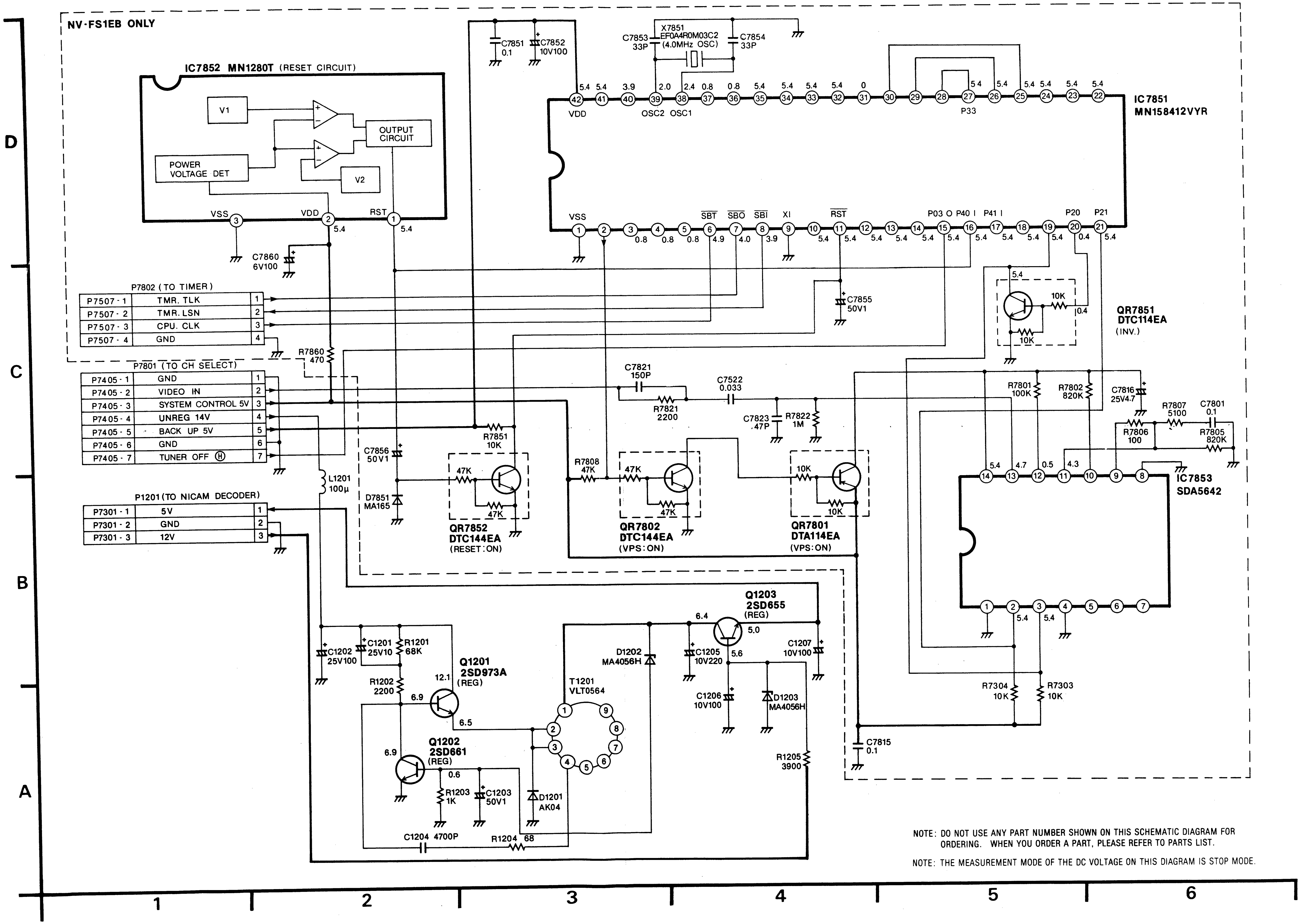
3-39. NICAM DECODER C.B.A. (VEP07513A: NV-FS1B) (VEP07513B: NV-FS1EB)


E
D
C
B
A
1
2
3
4
5
6
IC7306
IC7305
IC7304
IC7303
IC7302
IC7301
IC7901
DECODER R
DECODER L
VR7301
VR7302
X7301
X7901
X7902
Q7301
Q7302
Q7303
Q7304
Q7305
Q7307
Q7901
QR7301
QR7302
QR7303
P7301
P7302
TP7302
TP7303
TP7304
TP7901
TP7902
TP7903
TP7904
TP7905
TP7906
TP7907
FL7301
FL7302
FL7303
FL7304
FL7305
FL7306
FL7307
FL7308
FL7309
FL7310
FL7311
FL7312
FL7313
FL7314
FL7315
FL7316
FL7901
FL7902
L7301
L7302
L7303
L7304
L7901
L7902
D7301
D7302
D7303
D7304
D7305
D7306
D7307
D7901
C7940
C7941
B
C
E

NICAM DECODER C.B.A.	
Transistor	
Q7301	D-6
Q7302	C-4
Q7303	C-5
Q7304	C-5
Q7305	A-5
Q7307	A-6
Q7901	B-5
Transistor & Resistor	
QR7301	A-5
QR7302	A-2
QR7303	A-5
Integrated Circuit	
IC7301	C-2
IC7302	B-2
IC7303	D-2
IC7304	D-2
IC7305	D-5
IC7306	E-4
IC7901	C-4
Test Point	
TP7302	D-6
TP7303	C-6
TP7304	C-6
TP7901	B-6
TP7902	B-4
TP7903	B-4
TP7904	A-3
TP7905	A-3
TP7906	C-3
TP7907	B-3
Adjustment	
C7940	B-3
C7941	B-5
VR7301	D-4
VR7302	D-4
Connector	
P7301	B-6
P7302	D-6

ADDRESS INFORMATION

3-40. VPS/POWER 2 SCHEMATIC DIAGRAM

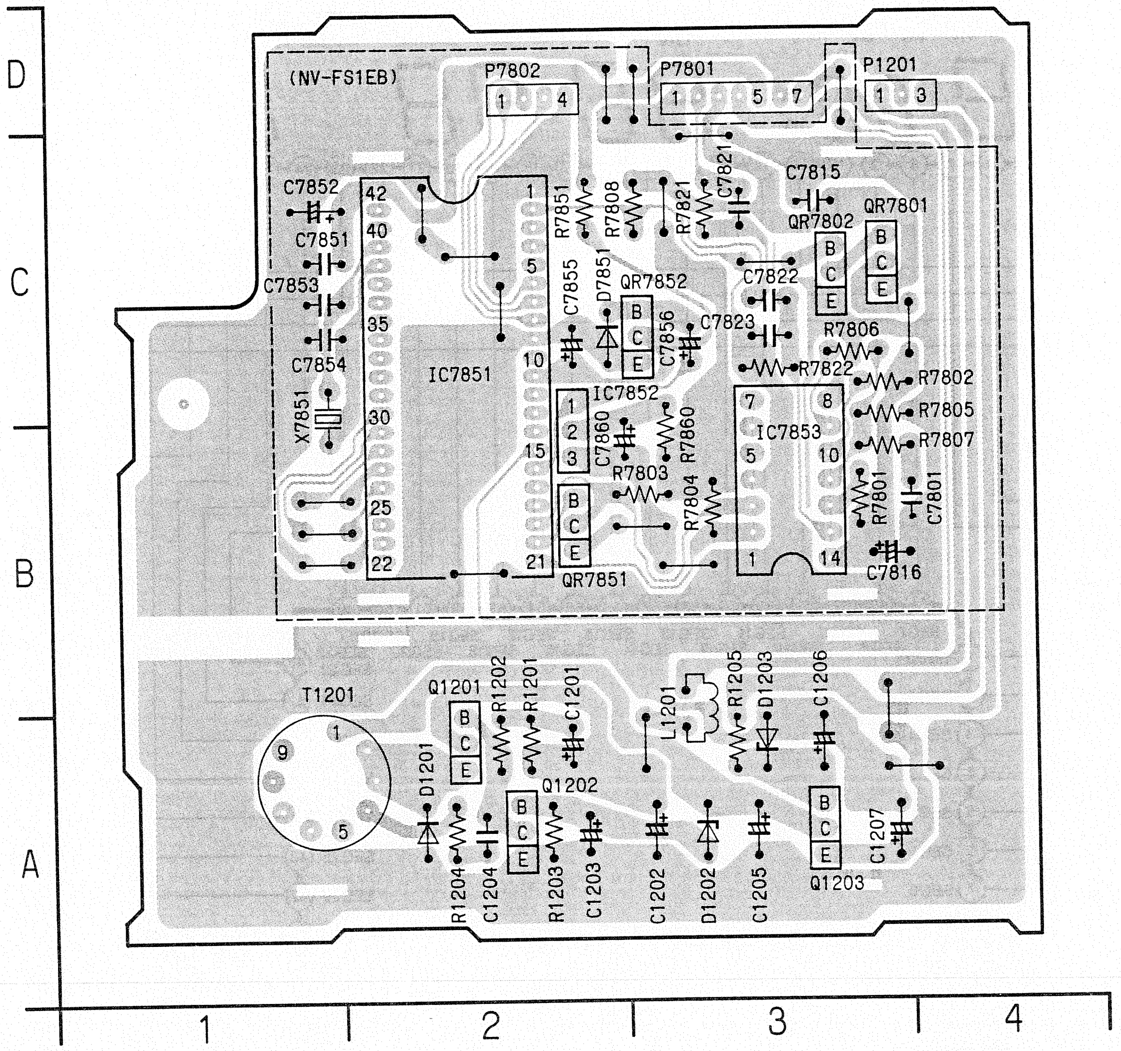

NV-FS1EB ONLY
IC7852 MN1280T (RESET CIRCUIT)
V1
V2
OUTPUT CIRCUIT
POWER VOLTAGE DET
VSS 3
VDD 2
RST 1
5.4
C7860 6V100
P7802 (TO TIMER)
P7507-1 TMR. TLK 1
P7507-2 TMR. LSN 2
P7507-3 CPU. CLK 3
P7507-4 GND 4
R7860 470
P7801 (TO CH SELECT)
P7405-1 GND 1
P7405-2 VIDEO IN 2
P7405-3 SYSTEM CONTROL 5V 3
P7405-4 UNREG 14V 4
P7405-5 BACK UP 5V 5
P7405-6 GND 6
P7405-7 TUNER OFF Ⓗ 7
P1201 (TO NICAM DECODER)
P7301-1 5V 1
P7301-2 GND 2
P7301-3 12V 3
C7851 0.1
C7852 10V100
X7851 EF0A4R0M03C2 (4.0MHz OSC)
C7853 33P
C7854 33P
IC7851 MN158412VYR
VDD
OSC2 OSC1
P33
VSS
SBT SBO SBI XI RST
P03 O P40 I P41 I
P20 P21
C7855 50V1
QR7851 DTC114EA (INV.)
10K
C7821 150P
R7821 2200
C7522 0.033
C7823 .47P
R7822 1M
R7801 100K
R7802 820K
C7816 25V4.7
R7807 5100
C7801 0.1
R7806 100
R7805 820K
IC7853 SDA5642
C7856 50V1
D7851 MA165
L1201 100µ
R7851 10K
QR7852 DTC144EA (RESET:ON)
47K
R7808 47K
QR7802 DTC144EA (VPS:ON)
QR7801 DTA114EA (VPS:ON)
Q1203 2SD655 (REG)
D1202 MA4056H
C1205 10V220
C1207 10V100
C1206 10V100
D1203 MA4056H
R1205 3900
C7815 0.1
R7304 10K
R7303 10K
C1202 25V100
C1201 25V10
R1201 68K
Q1201 2SD973A (REG)
R1202 2200
T1201 VLT0564
Q1202 2SD661 (REG)
R1203 1K
C1203 50V1
D1201 AK04
C1204 4700P
R1204 68
D
C
B
A
1
2
3
4
5
6

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

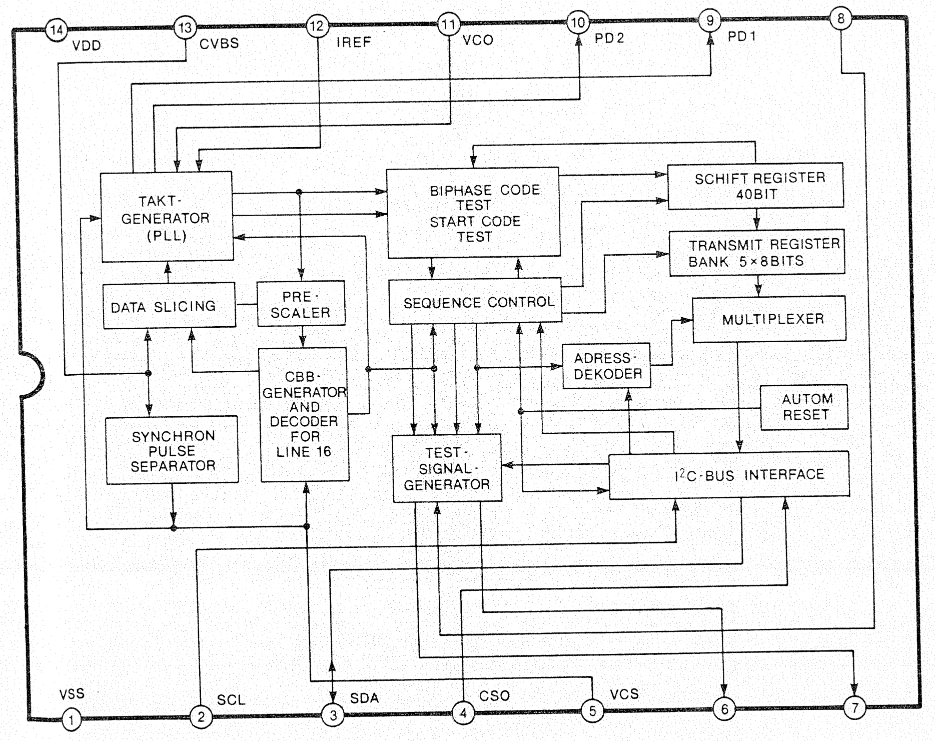
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

Back Page:
NICAM DECODER Section

3-41. VPS/POWER 2 C.B.A. (VEP01355B: NV-FS1B) (VEP01355A: NV-FS1EB)


D
C
B
A
1
2
3
4
(NV-FS1EB)
P7802
P7801
P1201
C7852
C7851
C7853
C7854
X7851
IC7851
42
40
35
30
25
22
1
5
10
15
21
R7851
R7808
R7821
C7821
C7815
QR7801
QR7802
C7855
D7851
QR7852
C7856
C7822
C7823
R7806
R7822
R7802
R7805
R7807
IC7852
C7860
R7860
R7803
R7804
IC7853
7
8
14
R7801
C7801
C7816
QR7851
B
C
E
T1201
Q1201
R1202
R1201
C1201
L1201
R1205
D1203
C1206
D1201
Q1202
R1204
C1204
R1203
C1203
C1202
D1202
C1205
Q1203
C1207
9
5

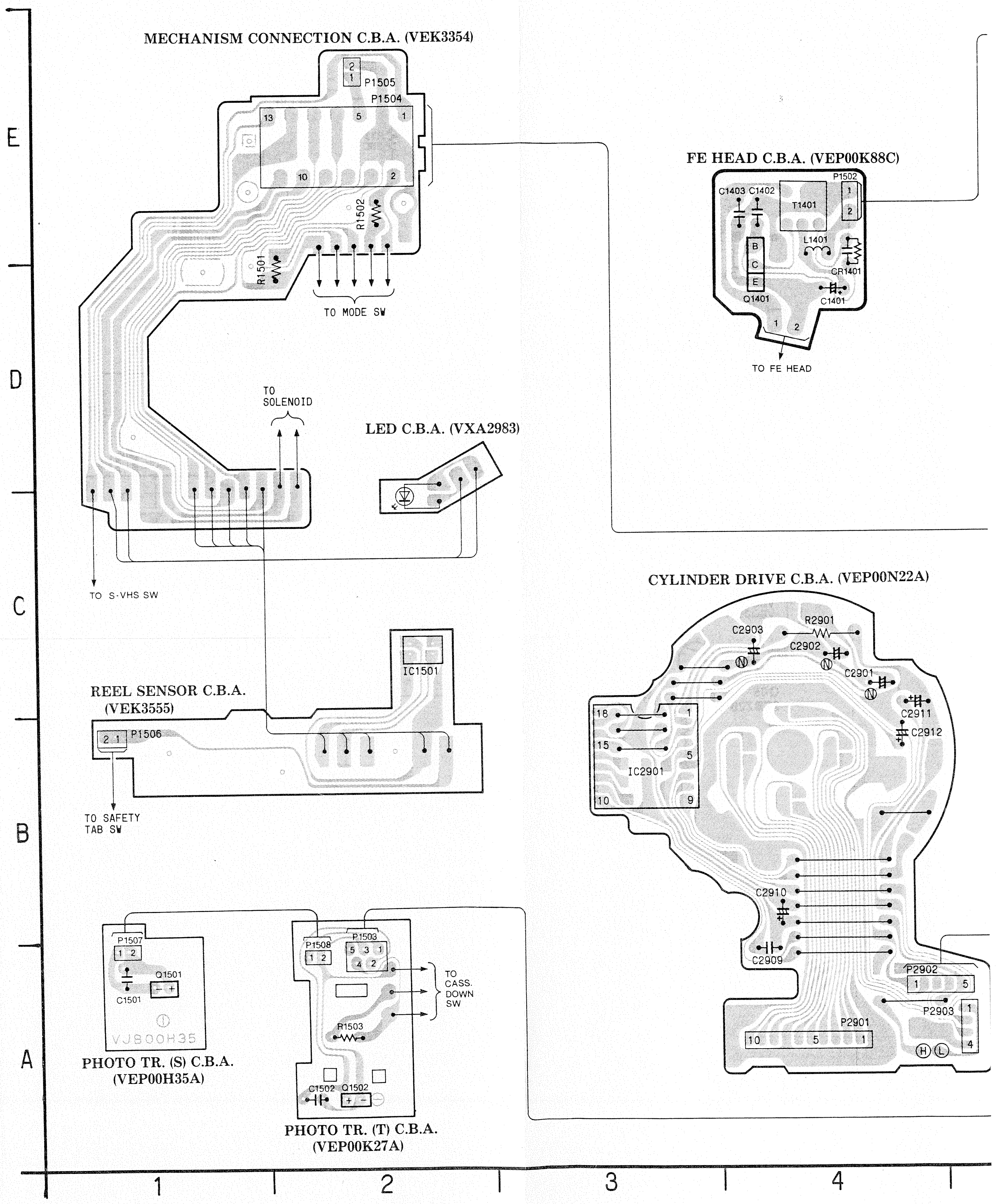
IC BLOCK IC7853 (SDA5642)


14
VDD
13
CVBS
12
IREF
11
VCO
10
PD2
9
PD1
8
TAKT-GENERATOR (PLL)
BIPHASE CODE TEST START CODE TEST
SCHIFT REGISTER 40BIT
TRANSMIT REGISTER BANK 5×8BITS
DATA SLICING
PRE-SCALER
SEQUENCE CONTROL
MULTIPLEXER
ADRESS-DEKODER
CBB-GENERATOR AND DECODER FOR LINE 16
AUTOM RESET
SYNCHRON PULSE SEPARATOR
TEST-SIGNAL-GENERATOR
I²C-BUS INTERFACE
VSS
1
SCL
2
3
SDA
4
CSO
5
VCS
6
7

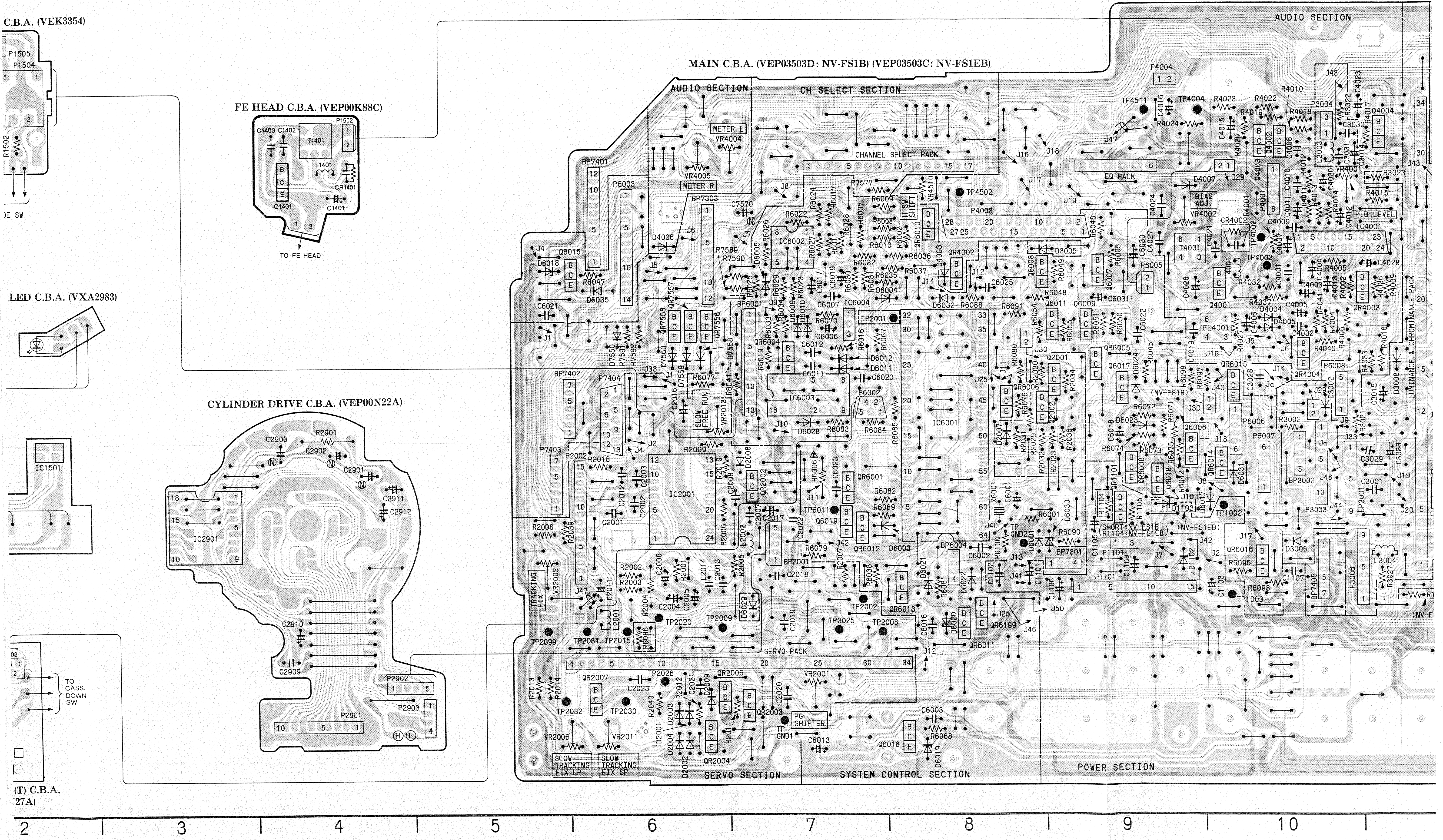
VPS/POWER 2 C.B.A.	
Transistor	
Q1201	B-2
Q1202	A-2
Q1203	A-3
Transistor & Resistor	
QR7801	C-3
QR7802	C-3
QR7851	B-2
QR7852	B-2
Integrated Circuit	
IC7851	C-2
IC7852	C-2
IC7853	B-3
Connector	
P1201	D-3
P7801	D-3
P7802	D-2

ADDRESS INFORMATION

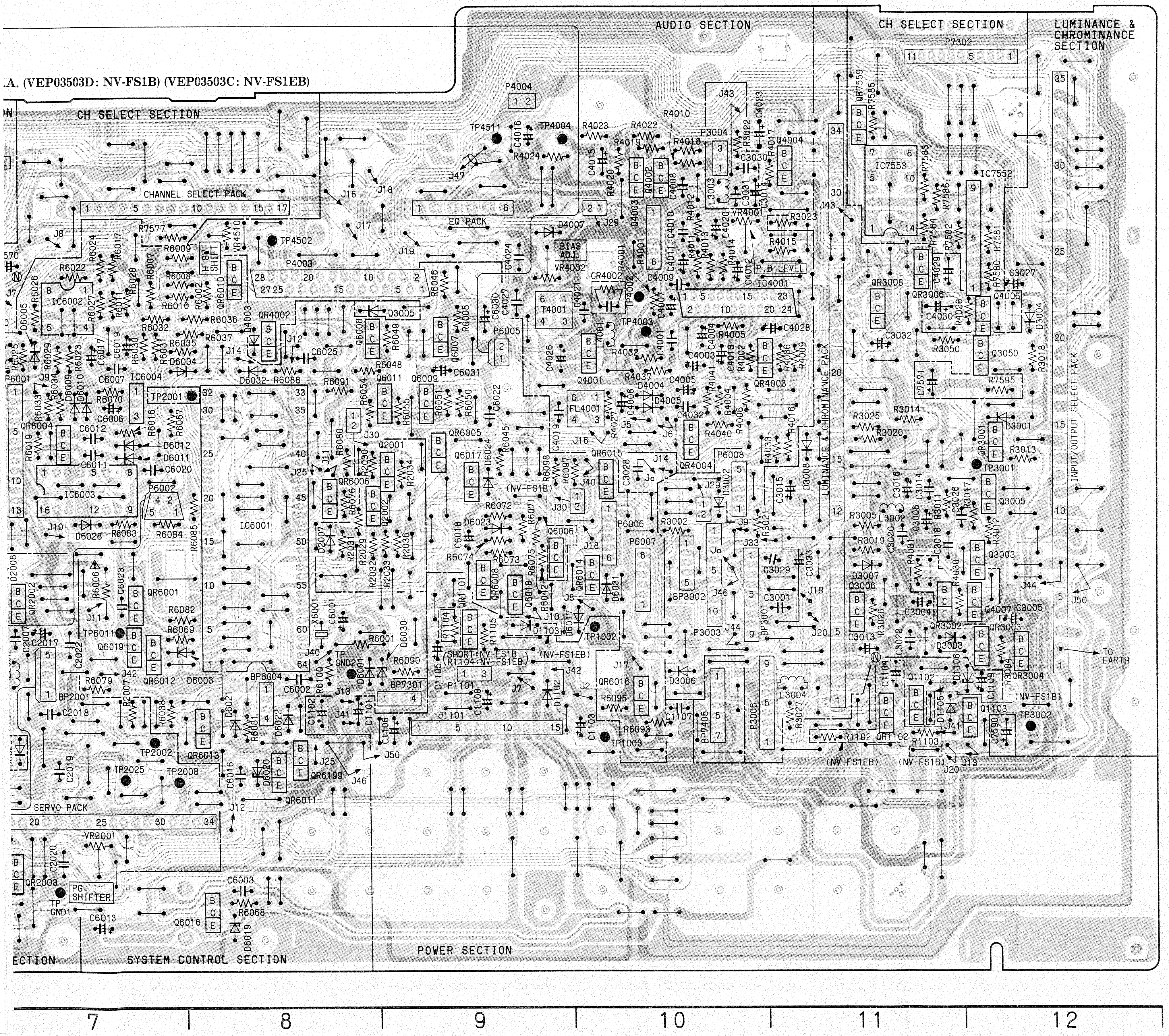
3-42. MAIN C.B.A. (VEP03503D: NV-FS1B) (VEP03503C: NV-FS1EB)


E
D
C
B
A
1
2
3
4
MECHANISM CONNECTION C.B.A. (VEK3354)
P1505
P1504
13
5
1
10
2
R1502
R1501
TO MODE SW
TO SOLENOID
TO S-VHS SW
FE HEAD C.B.A. (VEP00K88C)
C1403
C1402
P1502
T1401
L1401
Q1401
CR1401
C1401
TO FE HEAD
LED C.B.A. (VXA2983)
CYLINDER DRIVE C.B.A. (VEP00N22A)
R2901
C2903
C2902
C2901
C2911
C2912
IC2901
18
15
10
1
5
9
C2910
C2909
P2902
P2903
P2901
REEL SENSOR C.B.A. (VEK3555)
P1506
IC1501
TO SAFETY TAB SW
P1507
Q1501
C1501
VJ800H35
PHOTO TR. (S) C.B.A. (VEP00H35A)
P1508
P1503
R1503
C1502
Q1502
TO CASS. DOWN SW
PHOTO TR. (T) C.B.A. (VEP00K27A)

D: NV-FS1B) (VEP03503C: NV-FS1EB)



C.B.A. (VEK3354)
P1505
P1504
R1502
DE SW
FE HEAD C.B.A. (VEP00K88C)
C1403 C1402
T1401
P1502
L1401
CR1401
Q1401
C1401
TO FE HEAD
LED C.B.A. (VXA2983)
CYLINDER DRIVE C.B.A. (VEP00N22A)
R2901
C2903
C2902
C2901
C2911
C2912
IC2901
C2910
C2909
P2902
P2903
P2901
IC1501
TO CASS. DOWN SW
(T) C.B.A.
27A)
MAIN C.B.A. (VEP03503D: NV-FS1B) (VEP03503C: NV-FS1EB)
AUDIO SECTION
CH SELECT SECTION
CHANNEL SELECT PACK
METER L
METER R
VR4004
VR4005
EQ PACK
BIAS ADJ.
P.B LEVEL
LUMINANCE & CHROMINANCE PACK
IC4001
IC6001
IC6002
IC6003
IC6004
IC2001
SLOW FREE RUN
TRACKING FIX
SERVO PACK
PG SHIFTER
SLOW TRACKING FIX LP
SLOW TRACKING FIX SP
SERVO SECTION
SYSTEM CONTROL SECTION
POWER SECTION
SHORT: NV-FS1B
R1104: NV-FS1EB
(NV-FS1B)
(NV-FS1EB)
2
3
4
5
6
7
8
9
10


.A. (VEP03503D: NV-FS1B) (VEP03503C: NV-FS1EB)
AUDIO SECTION
CH SELECT SECTION
LUMINANCE & CHROMINANCE SECTION
CHANNEL SELECT PACK
EQ PACK
BIAS ADJ.
H SW SHIFT
P.B LEVEL
LUMINANCE & CHROMINANCE PACK
INPUT/OUTPUT SELECT PACK
SERVO PACK
PG SHIFTER
TO EARTH
(NV-FS1B)
(NV-FS1EB)
SHORT-NV-FS1B
R1104-NV-FS1EB
POWER SECTION
SYSTEM CONTROL SECTION
ECTION
7
8
9
10
11
12

MAIN C.B.A. ADDRESS INFORMATION

POWER SUPPLY Section	
Transistor	
Q1102	B-11
Q1103	B-12
Transistor & Resistor	
QR1101	C-9
QR1102	B-11
Test Point	
TP1002	B-10
TP1003	B-10
Connector	
P1101	B-9

ADDRESS INFORMATION

SYSTEM CONTROL Section	
Transistor	
Q1401	D-4
Q1501	A-1
Q1502	A-2
Q6006	C-9
Q6007	D-9
Q6008	D-8
Q6009	D-9
Q6011	D-9
Q6015	D-6
Q6016	A-8
Q6017	C-9
Q6018	C-9
Q6019	B-7
Transistor & Resistor	
QR6001	C-7
QR6004	C-7
QR6005	C-9
QR6006	C-8
QR6008	C-9
QR6010	D-8
QR6011	B-8
QR6012	B-7
QR6013	B-8
QR6014	C-10
QR6015	C-10
QR6016	B-10
QR6199	B-8
Integrated Circuit	
IC1501	C-2
IC6001	C-8
IC6002	D-7
IC6003	C-7
IC6004	D-7
Test Point	
TP6011	B-7
TP GND 2	B-8
Connector	
P1502	E-4
P1503	A-2
P1504	E-2
P1505	E-2
P1506	B-1
P1507	B-1
P1508	A-2
P6002	C-7
P6003	D-6
P6005	D-9
P6006	C-10
P6007	C-10
P6008	C-10
BP6001	D-7
BP6004	B-8

ADDRESS INFORMATION

SERVO Section	
Transistor	
Q2001	C-9
Q2002	C-9
Transistor & Resistor	
QR2002	C-7
QR2003	A-7
QR2004	A-6
QR2006	A-6
QR2007	A-6
Integrated Circuit	
IC2001	B-6
IC2901	B-3
Test Point	
TP2001	D-7
TP2002	B-7
TP2008	B-7
TP2009	B-6
TP2015	B-6
TP2020	B-6
TP2025	B-7
TP2026	A-6
TP2030	A-6
TP2031	B-6
TP2032	A-5
TP2099	B-5
TP GND 1	A-7
Adjustment	
VR2001	A-7
VR2002	B-5
VR2006	A-5
VR2011	A-6
VR2013	C-6
Connector	
P2002	C-6
P2901	A-4
P2902	A-4
P2903	A-4
BP2001	B-7

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q3003	C-12
Q3005	C-12
Q3006	C-11
Q3050	D-12
Transistor & Resistor	
QR3001	C-12
QR3002	B-11
QR3003	B-12
QR3004	B-12
QR3006	D-11
QR3008	D-11
Test Point	
TP3001	C-12
TP3002	B-12
Connector	
P3003	B-10
P3004	E-10
P3006	B-10
BP3001	B-10
BP3002	C-10

ADDRESS INFORMATION

AUDIO Section	
Transistor	
Q4001	D-10
Q4002	E-10
Q4003	E-10
Q4004	E-11
Q4006	D-12
Q4007	C-12
Transistor & Resistor	
QR4002	D-8
QR4003	D-10
QR4004	C-10
Integrated Circuit	
IC4001	D-11
Test Point	
TP4002	D-10
TP4003	D-10
TP4004	E-9
TP4502	D-8
TP4511	E-9
Adjustment	
VR4001	E-10
VR4002	D-9
VR4004	E-7
VR4005	D-6
VR4510	D-8
Connector	
P4001	D-10
P4003	D-8
P4004	E-9

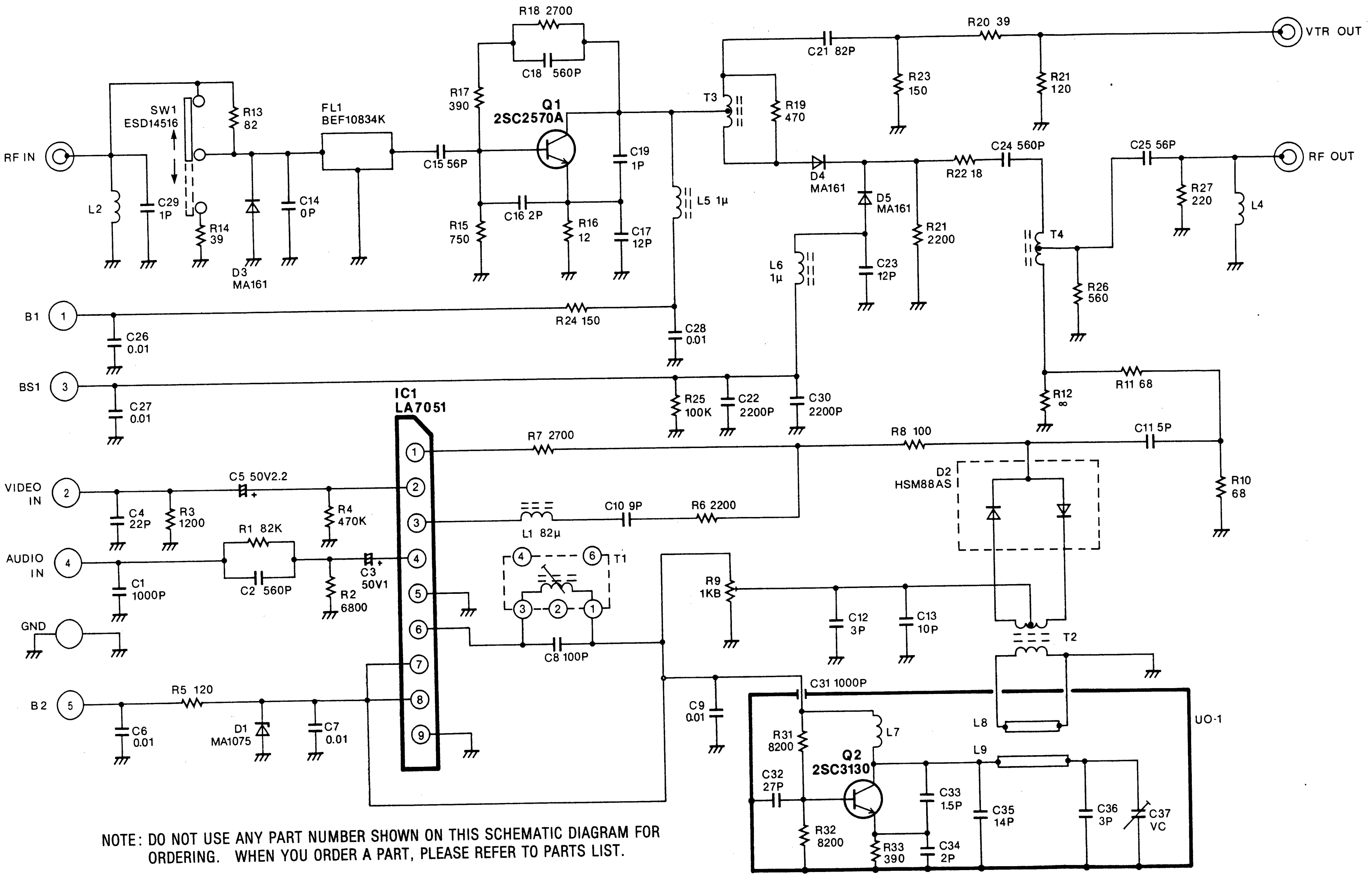
ADDRESS INFORMATION

CHANNEL SELECT Section	
Transistor & Resistor	
QR7556	D-6
QR7557	D-6
QR7558	D-6
QR7559	E-11
Integrated Circuit	
IC7552	E-12
IC7553	E-11
Connector	
P7302	E-11
P7403	C-5
P7404	C-6
BP7301	B-9
BP7303	D-6
BP7401	E-6
BP7402	C-6
BP7405	B-10

ADDRESS INFORMATION

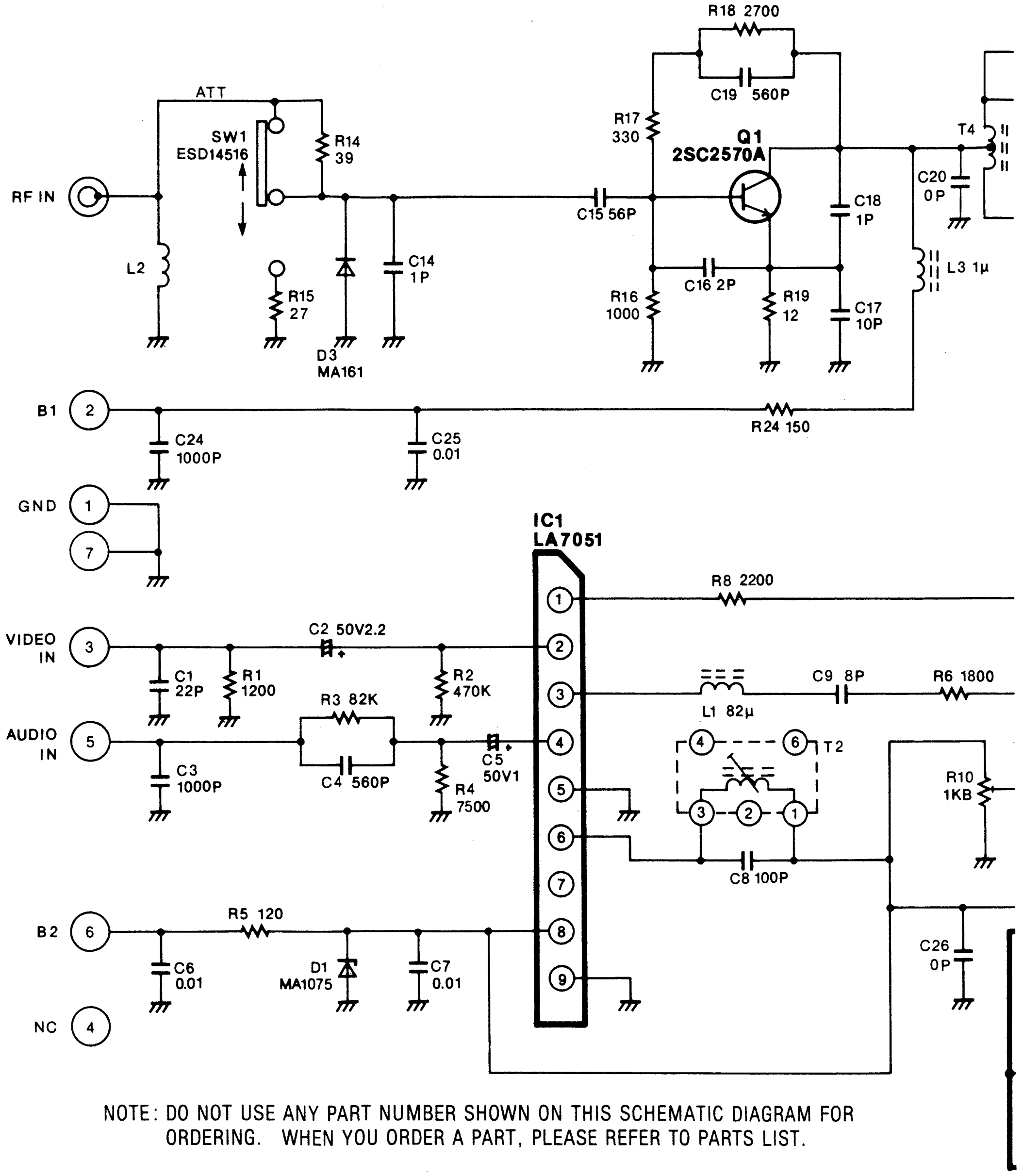
Next Page:
RF CONVERTER &
DIGITAL SCANNER Section

3-43. RF CONVERTER SCHEMATIC DIAGRAM (ENC87952: NV-FS1B)

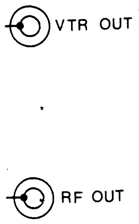

RF IN
SW1
ESD14516
R13 82
FL1
BEF10834K
R18 2700
C18 560P
R17 390
Q1
2SC2570A
C15 56P
C19 1P
C16 2P
R15 750
R16 12
C17 12P
L5 1μ
L2
C29 1P
R14 39
C14 0P
D3
MA161
T3
R19 470
C21 82P
R20 39
VTR OUT
R23 150
R21 120
D4
MA161
D5
MA161
R22 18
C24 560P
C25 56P
RF OUT
R27 220
L4
R21 2200
T4
L6
1μ
C23 12P
R26 560
B1 1
R24 150
C28 0.01
C26 0.01
BS1 3
C27 0.01
IC1
LA7051
R25 100K
C22 2200P
C30 2200P
R11 68
R12 ∞
R7 2700
R8 100
C11 5P
D2
HSM88AS
R10 68
VIDEO IN 2
C5 50V2.2
C4 22P
R3 1200
R4 470K
R1 82K
L1 82μ
C10 9P
R6 2200
AUDIO IN 4
C1 1000P
C2 560P
C3 50V1
R2 6800
T1
R9 1KB
C12 3P
C13 10P
GND
C8 100P
T2
B2 5
R5 120
D1 MA1075
C6 0.01
C7 0.01
C9 0.01
C31 1000P
UO-1
R31 8200
L7
L8
C32 27P
Q2
2SC3130
L9
C33 1.5P
C35 14P
C36 3P
C37 VC
R32 8200
R33 390
C34 2P

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

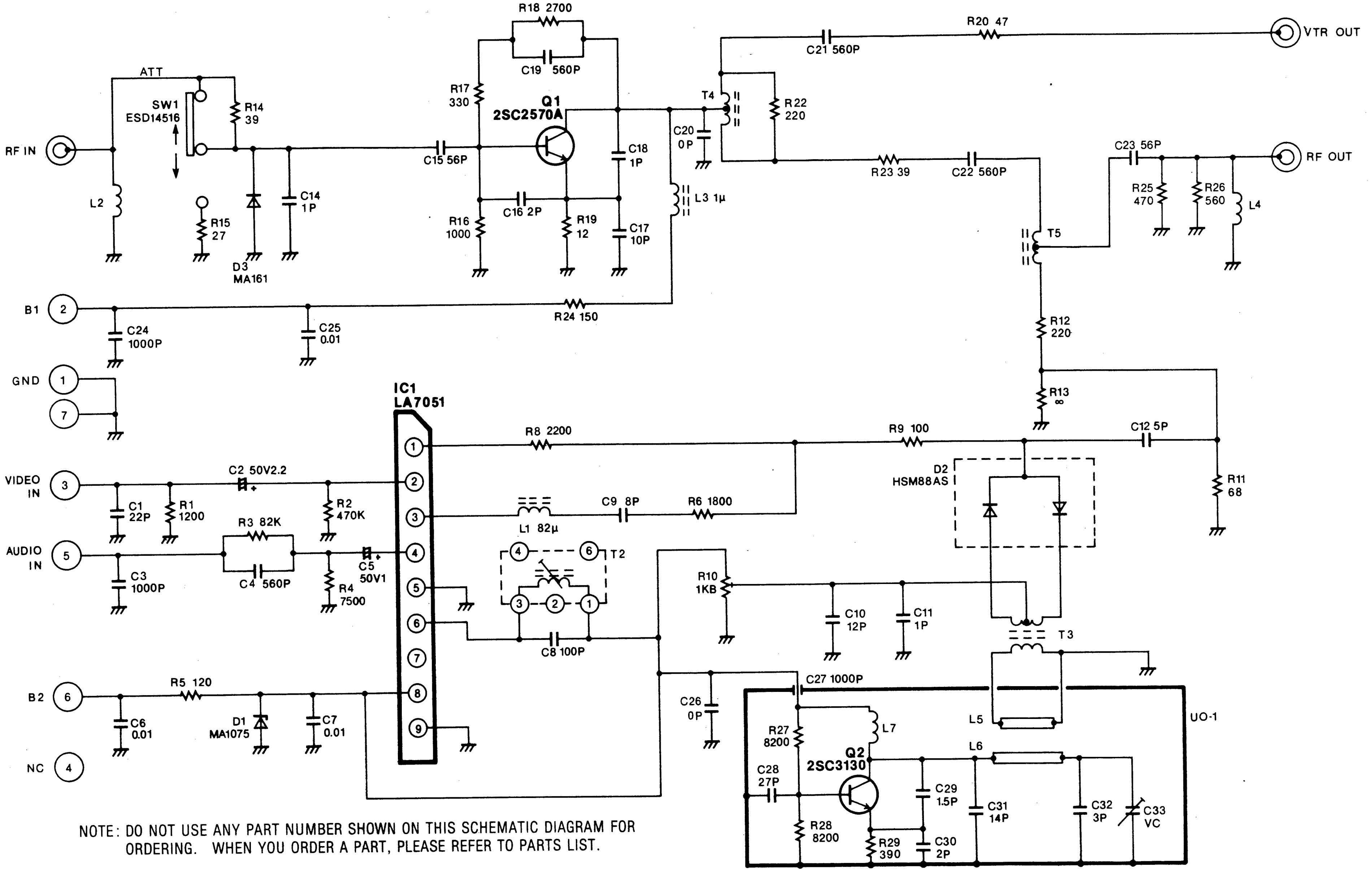
3-44. RF CONVERTER SCHEMATIC DIAGRAM (ENC87


ATT
SW1
ESD14516
R14 39
RF IN
L2
R15 27
D3
MA161
C14 1P
C15 56P
R18 2700
C19 560P
R17 330
Q1
2SC2570A
C18 1P
T4
C20 0P
L3 1μ
C16 2P
R16 1000
R19 12
C17 10P
B1 2
R24 150
C24 1000P
C25 0.01
GND 1
7
IC1
LA7051
R8 2200
VIDEO IN 3
C2 50V2.2
C1 22P
R1 1200
R2 470K
R3 82K
C9 8P
R6 1800
L1 82μ
AUDIO IN 5
C3 1000P
C4 560P
C5 50V1
R4 7500
T2
R10 1KB
C8 100P
B2 6
R5 120
D1 MA1075
C6 0.01
C7 0.01
C26 0P
NC 4

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

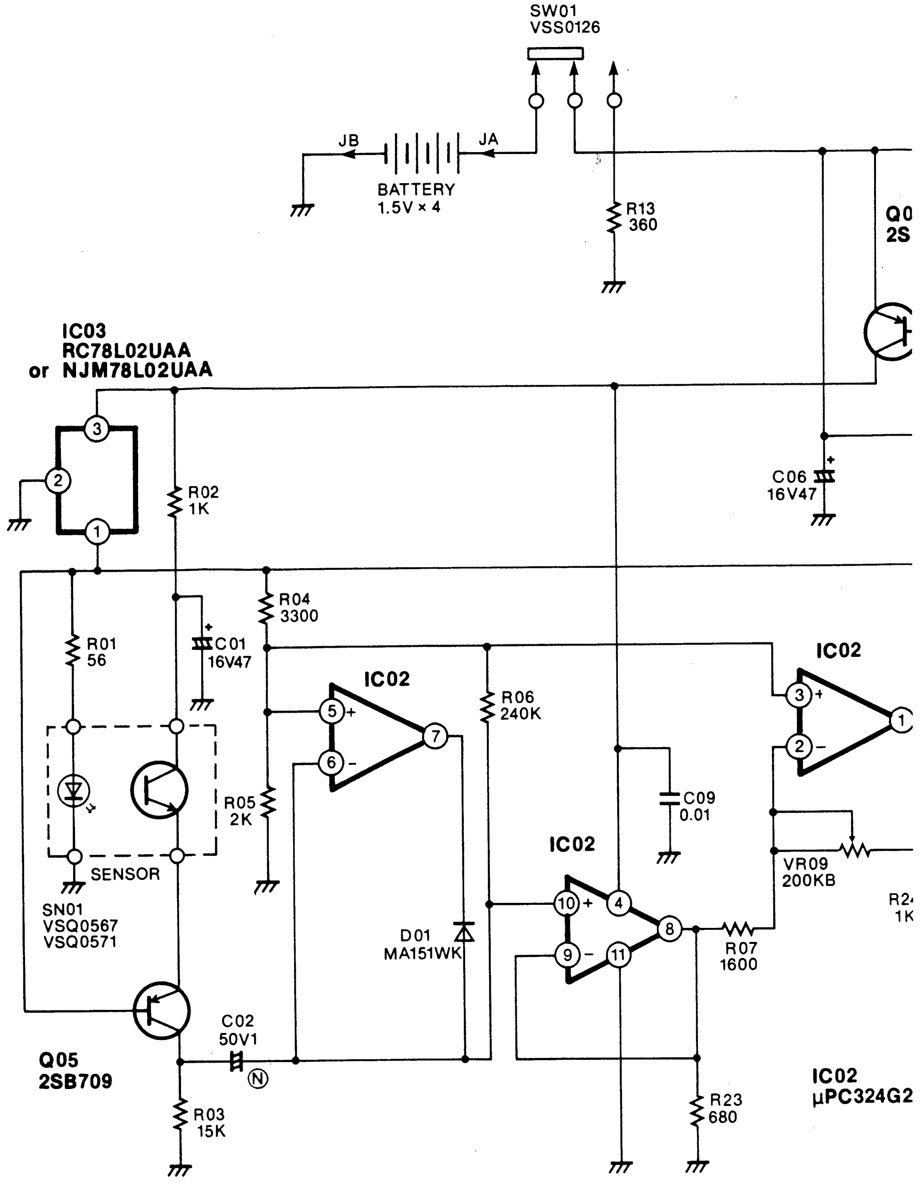

VTR OUT
RF OUT

3-44. RF CONVERTER SCHEMATIC DIAGRAM (ENC87954: NV-FS1EB)


RF IN
ATT
SW1
ESD14516
R14
39
L2
R15
27
D3
MA161
C14
1P
C15 56P
R18 2700
C19 560P
R17
330
Q1
2SC2570A
R16
1000
C16 2P
R19
12
C18
1P
C17
10P
T4
C20
0P
L3 1μ
C21 560P
R20 47
VTR OUT
R22
220
R23 39
C22 560P
C23 56P
R25
470
R26
560
L4
RF OUT
T5
R12
220
R13
∞
B1
C24
1000P
C25
0.01
R24 150
GND
IC1
LA7051
R8 2200
R9 100
C12 5P
D2
HSM88AS
R11
68
VIDEO
IN
C1
22P
R1
1200
C2 50V2.2
R2
470K
L1 82μ
C9 8P
R6 1800
AUDIO
IN
C3
1000P
R3 82K
C4 560P
R4
7500
C5
50V1
T2
C8 100P
R10
1KB
C10
12P
C11
1P
T3
B2
R5 120
C6
0.01
D1
MA1075
C7
0.01
NC
C27 1000P
C26
0P
R27
8200
L7
Q2
2SC3130
C28
27P
R28
8200
R29
390
C29
1.5P
C30
2P
C31
14P
L5
L6
C32
3P
C33
VC
UO-1

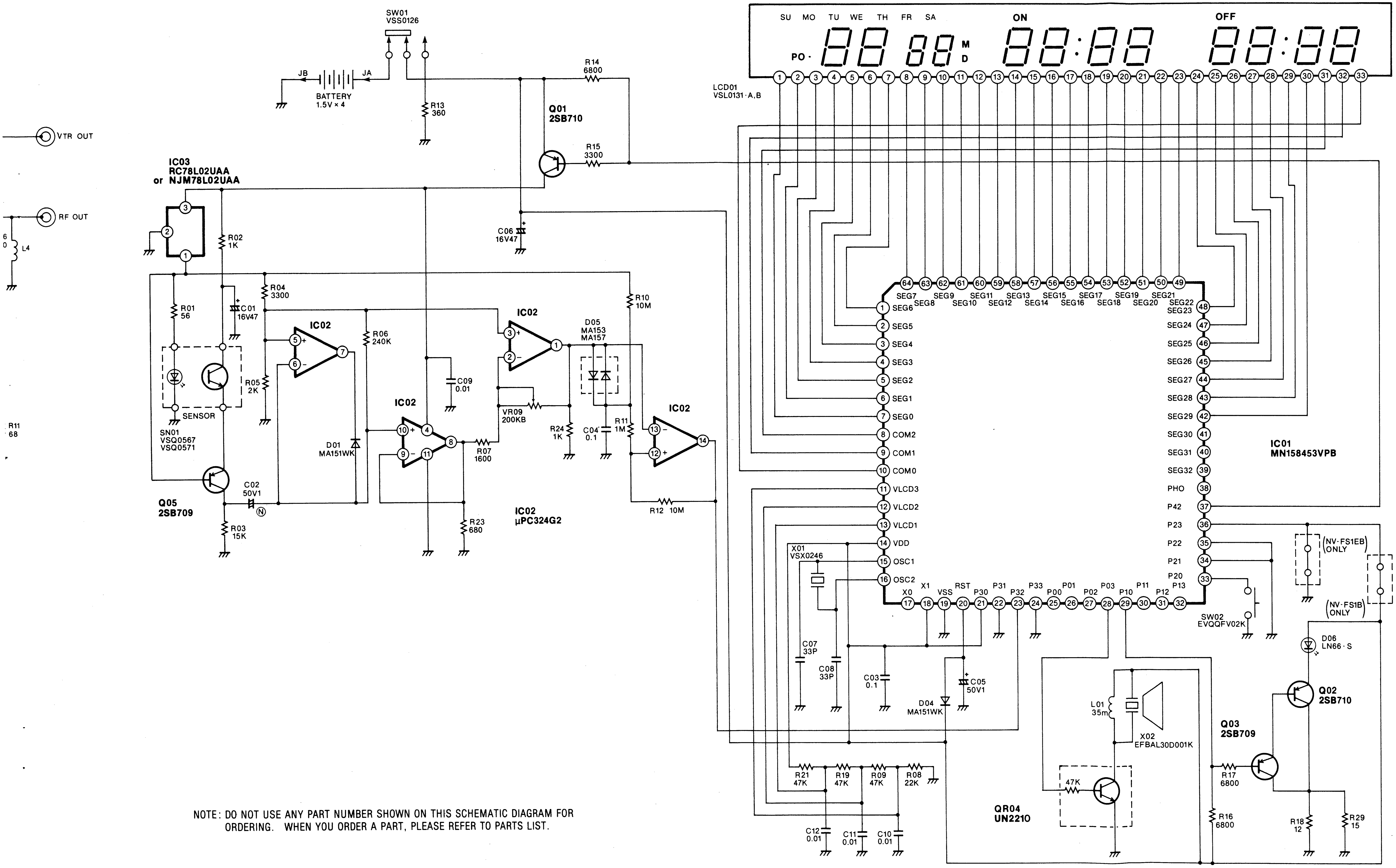
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-45. DIGITAL SCANNER SCHEMATIC DIAGRA


SW01
VSS0126
JB
JA
BATTERY
1.5V × 4
R13
360
Q0
2S
IC03
RC78L02UAA
or NJM78L02UAA
R02
1K
C06
16V47
R04
3300
R01
56
C01
16V47
IC02
R06
240K
IC02
R05
2K
SENSOR
SN01
VSQ0567
VSQ0571
C09
0.01
IC02
VR09
200KB
R2
1K
D01
MA151WK
R07
1600
Q05
2SB709
C02
50V1
R03
15K
R23
680
IC02
μPC324G2

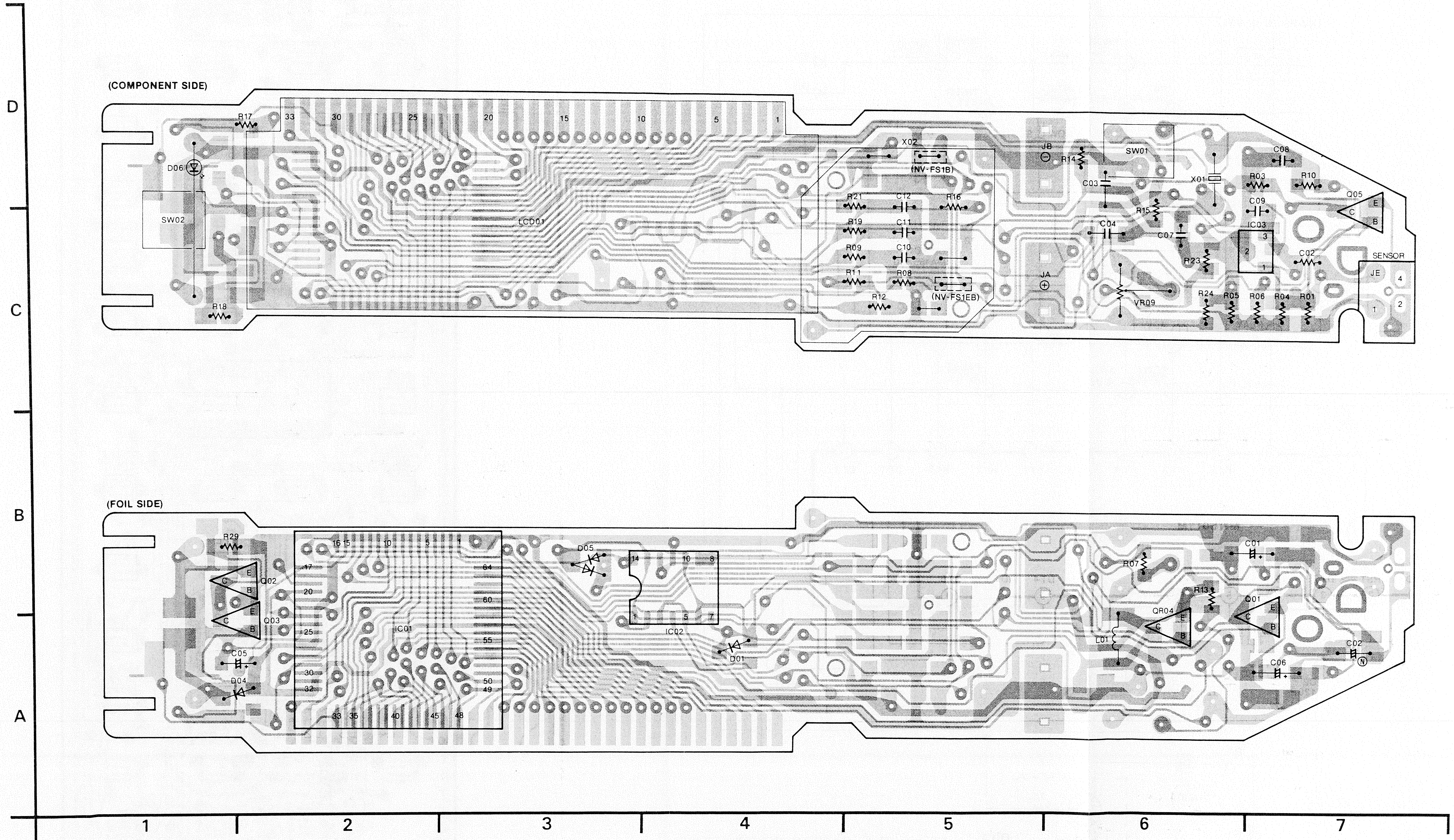
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM F ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-45. DIGITAL SCANNER SCHEMATIC DIAGRAM —— UNIT NO.: VEQ0692 (NV-FS1B), VEQ0691 (NV-FS1EB) ——

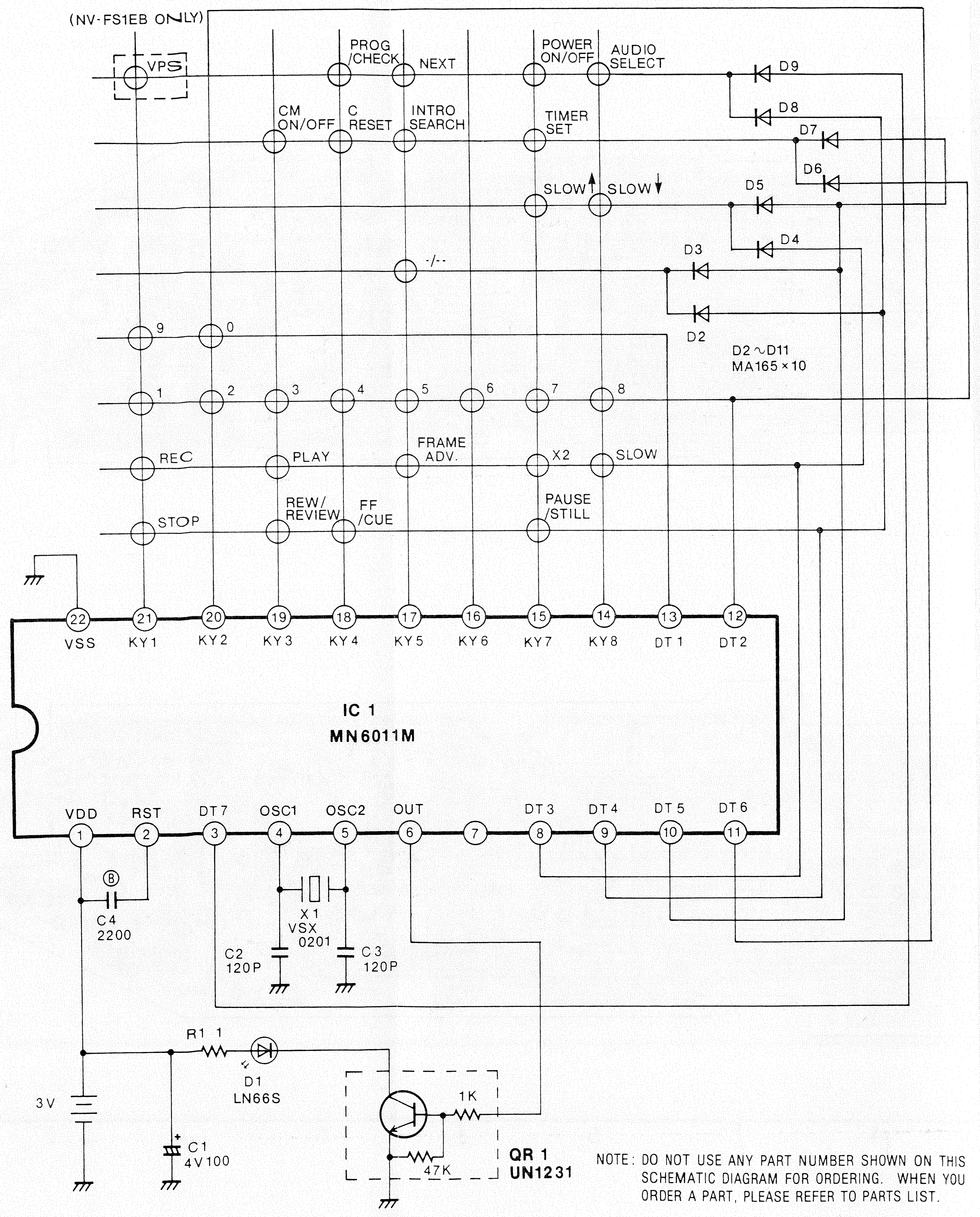

SW01
VSS0126
JB
JA
BATTERY
1.5V × 4
R13
360
R14
6800
Q01
2SB710
R15
3300
VTR OUT
RF OUT
L4
IC03
RC78L02UAA
or NJM78L02UAA
R02
1K
C06
16V47
R01
56
C01
16V47
R04
3300
R05
2K
SENSOR
SN01
VSQ0567
VSQ0571
IC02
R06
240K
C09
0.01
D01
MA151WK
Q05
2SB709
C02
50V1
R03
15K
R07
1600
R23
680
IC02
μPC324G2
VR09
200KB
R24
1K
C04
0.1
D05
MA153
MA157
R10
10M
R11
1M
R12 10M
R11
68
LCD01
VSL0131·A,B
SU
MO
TU
WE
TH
FR
SA
ON
OFF
PO·
M
D
IC01
MN158453VPB
SEG0
SEG1
SEG2
SEG3
SEG4
SEG5
SEG6
SEG7
SEG8
SEG9
SEG10
SEG11
SEG12
SEG13
SEG14
SEG15
SEG16
SEG17
SEG18
SEG19
SEG20
SEG21
SEG22
SEG23
SEG24
SEG25
SEG26
SEG27
SEG28
SEG29
SEG30
SEG31
SEG32
COM0
COM1
COM2
VLCD1
VLCD2
VLCD3
VDD
OSC1
OSC2
X0
X1
VSS
RST
P30
P31
P32
P33
P00
P01
P02
P03
P10
P11
P12
P13
P20
P21
P22
P23
P42
PHO
X01
VSX0246
C07
33P
C08
33P
C03
0.1
C05
50V1
D04
MA151WK
R21
47K
R19
47K
R09
47K
R08
22K
C12
0.01
C11
0.01
C10
0.01
L01
35m
X02
EFBAL30D001K
47K
QR04
UN2210
SW02
EVQQFV02K
(NV-FS1EB) ONLY
(NV-FS1B) ONLY
D06
LN66·S
Q02
2SB710
Q03
2SB709
R17
6800
R16
6800
R18
12
R29
15

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-46. DIGITAL SCANNER C.B.A. (VEP66039B: NV-FS1B) (VEP66039C: NV-FS1EB)


(COMPONENT SIDE)
D
C
R17
33
30
25
20
15
10
5
1
D06
SW02
LCD01
R18
X02
(NV-FS1B)
R21
C12
R16
R19
C11
R09
C10
R11
R08
R12
(NV-FS1EB)
JB
⊖
R14
SW01
C03
C04
C07
R15
X01
C08
R03
R10
C09
Q05
E
C
B
IC03
3
2
1
R23
C02
SENSOR
JE
4
2
1
JA
⊕
VR09
R24
R05
R06
R04
R01
(FOIL SIDE)
B
A
R29
Q02
Q03
C05
D04
16
15
10
5
1
17
20
25
30
32
33
35
40
45
48
49
50
55
60
64
IC01
D05
14
10
8
1
5
7
IC02
D01
R07
R13
QR04
Q01
L01
C01
C06
C02
N
1
2
3
4
5
6
7

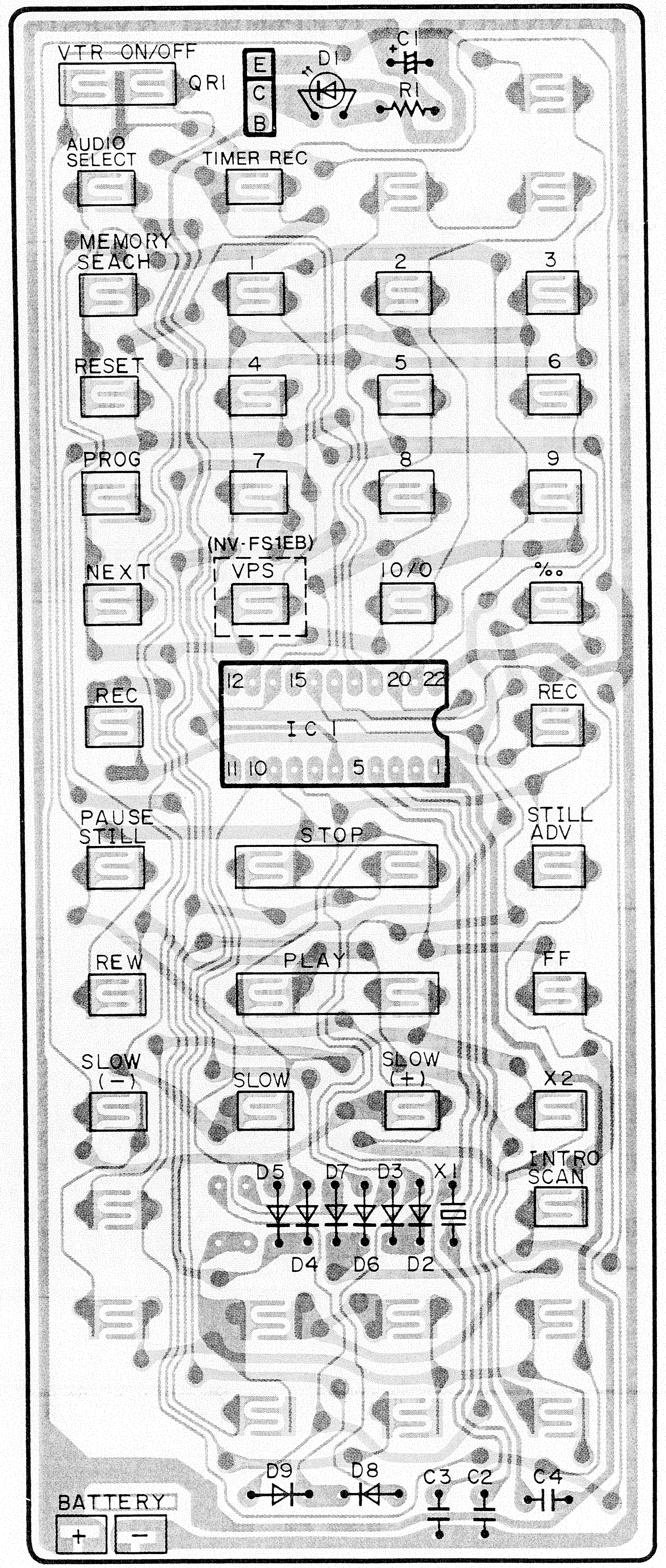
3-47. REMOTE CONTROLLER SCHEMATIC DIAGRAM
— UNIT NO.: VEQ0839 (NV-FS1B), VEQ0836 (NV-FS1EB) —


(NV-FS1EB ONLY)
VPS
PROG /CHECK
NEXT
POWER ON/OFF
AUDIO SELECT
CM ON/OFF
C RESET
INTRO SEARCH
TIMER SET
SLOW↑
SLOW↓
-/--
9
0
1
2
3
4
5
6
7
8
REC
PLAY
FRAME ADV.
X2
SLOW
STOP
REW/ REVIEW
FF /CUE
PAUSE /STILL
D9
D8
D7
D6
D5
D4
D3
D2
D2~D11 MA165×10
22 VSS
21 KY1
20 KY2
19 KY3
18 KY4
17 KY5
16 KY6
15 KY7
14 KY8
13 DT1
12 DT2
IC 1
MN6011M
1 VDD
2 RST
3 DT7
4 OSC1
5 OSC2
6 OUT
7
8 DT3
9 DT4
10 DT5
11 DT6
Ⓑ
C4 2200
X1 VSX 0201
C2 120P
C3 120P
R1 1
D1 LN66S
3V
C1 4V100
1K
47K
QR 1 UN1231

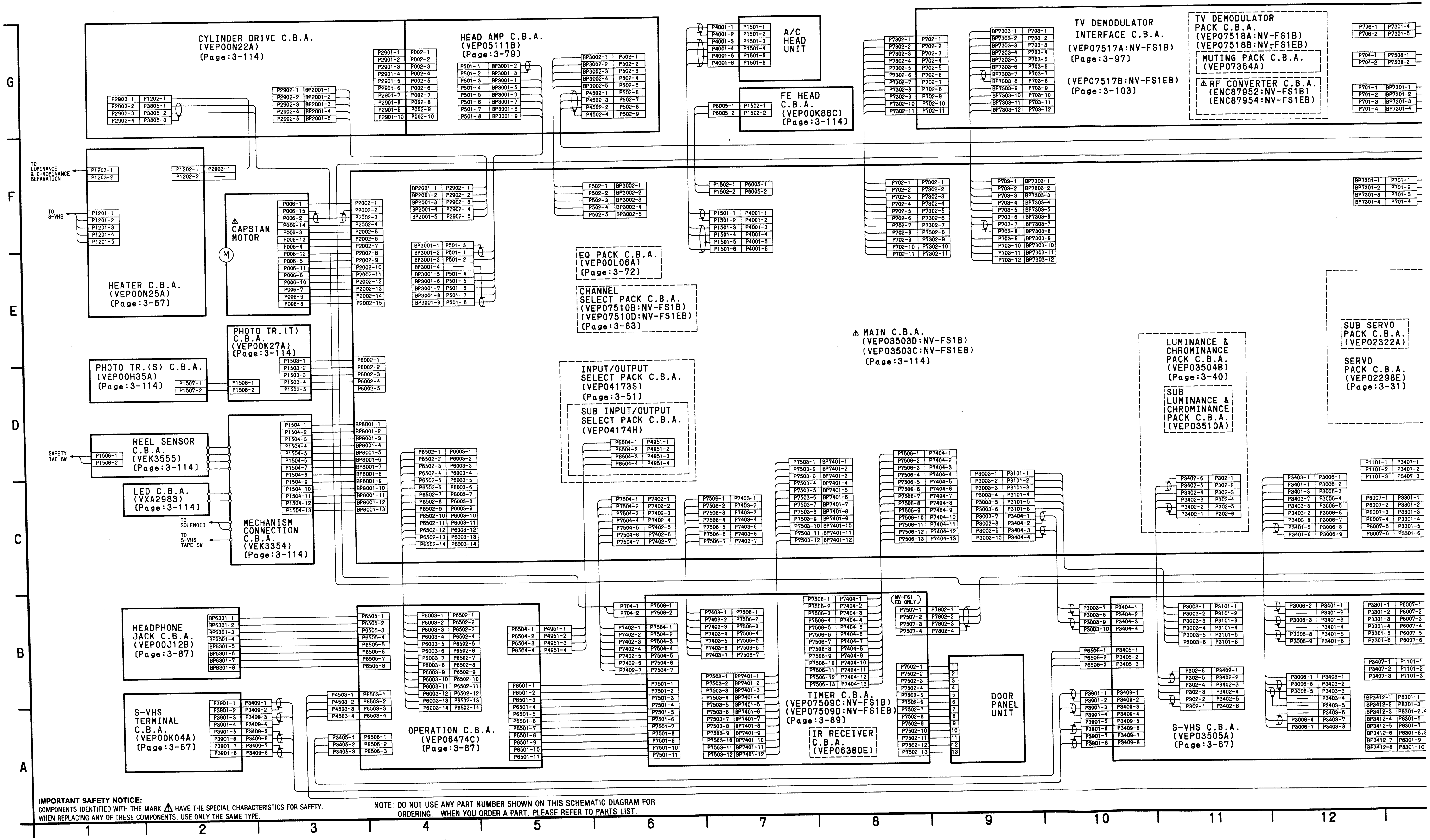
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
DIGITAL SCANNER Section

3-48. REMOTE CONTROLLER C.B.A. (VEP66030A)


VTR ON/OFF
QR1
E
C
B
D1
C1
R1
AUDIO SELECT
TIMER REC
MEMORY SEACH
1
2
3
RESET
4
5
6
PROG
7
8
9
(NV-FS1EB)
NEXT
VPS
10/0
%
12
15
20
22
IC1
11
10
5
1
REC
REC
PAUSE STILL
STOP
STILL ADV
REW
PLAY
FF
SLOW (−)
SLOW
SLOW (+)
X2
D5
D7
D3
X1
INTRO SCAN
D4
D6
D2
D9
D8
C3
C2
C4
BATTERY
+
−

3-49. INTERCONNECTION SCHEMATIC DIAGRAM


CYLINDER DRIVE C.B.A. (VEP00N22A) [Page:3-114]
HEAD AMP C.B.A. (VEP05111B) [Page:3-79]
A/C HEAD UNIT
FE HEAD C.B.A. (VEP00K88C) [Page:3-114]
TV DEMODULATOR INTERFACE C.B.A. (VEP07517A:NV-FS1B) [Page:3-97] (VEP07517B:NV-FS1EB) [Page:3-103]
TV DEMODULATOR PACK C.B.A. (VEP07518A:NV-FS1B) (VEP07518B:NV-FS1EB)
MUTING PACK C.B.A. (VEP07364A)
⚠ RF CONVERTER C.B.A. (ENC87952:NV-FS1B) (ENC87954:NV-FS1EB)
TO LUMINANCE & CHROMINANCE SEPARATION
TO S-VHS
HEATER C.B.A. (VEP00N25A) [Page:3-67]
⚠ CAPSTAN MOTOR
M
EQ PACK C.B.A. (VEP00L06A) [Page:3-72]
CHANNEL SELECT PACK C.B.A. (VEP07510B:NV-FS1B) (VEP07510D:NV-FS1EB) [Page:3-83]
PHOTO TR.(T) C.B.A. (VEP00K27A) [Page:3-114]
PHOTO TR.(S) C.B.A. (VEP00H35A) [Page:3-114]
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LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B) [Page:3-40]
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SUB SERVO PACK C.B.A. (VEP02322A)
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REEL SENSOR C.B.A. (VEK3555) [Page:3-114]
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TO S-VHS TAPE SW
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OPERATION C.B.A. (VEP06474C) [Page:3-87]
TIMER C.B.A. (VEP07509C:NV-FS1B) (VEP07509D:NV-FS1EB) [Page:3-89]
IR RECEIVER C.B.A. (VEP06380E)
(NV-FS1 EB ONLY)
DOOR PANEL UNIT
S-VHS C.B.A. (VEP03505A) [Page:3-67]
G
F
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D
C
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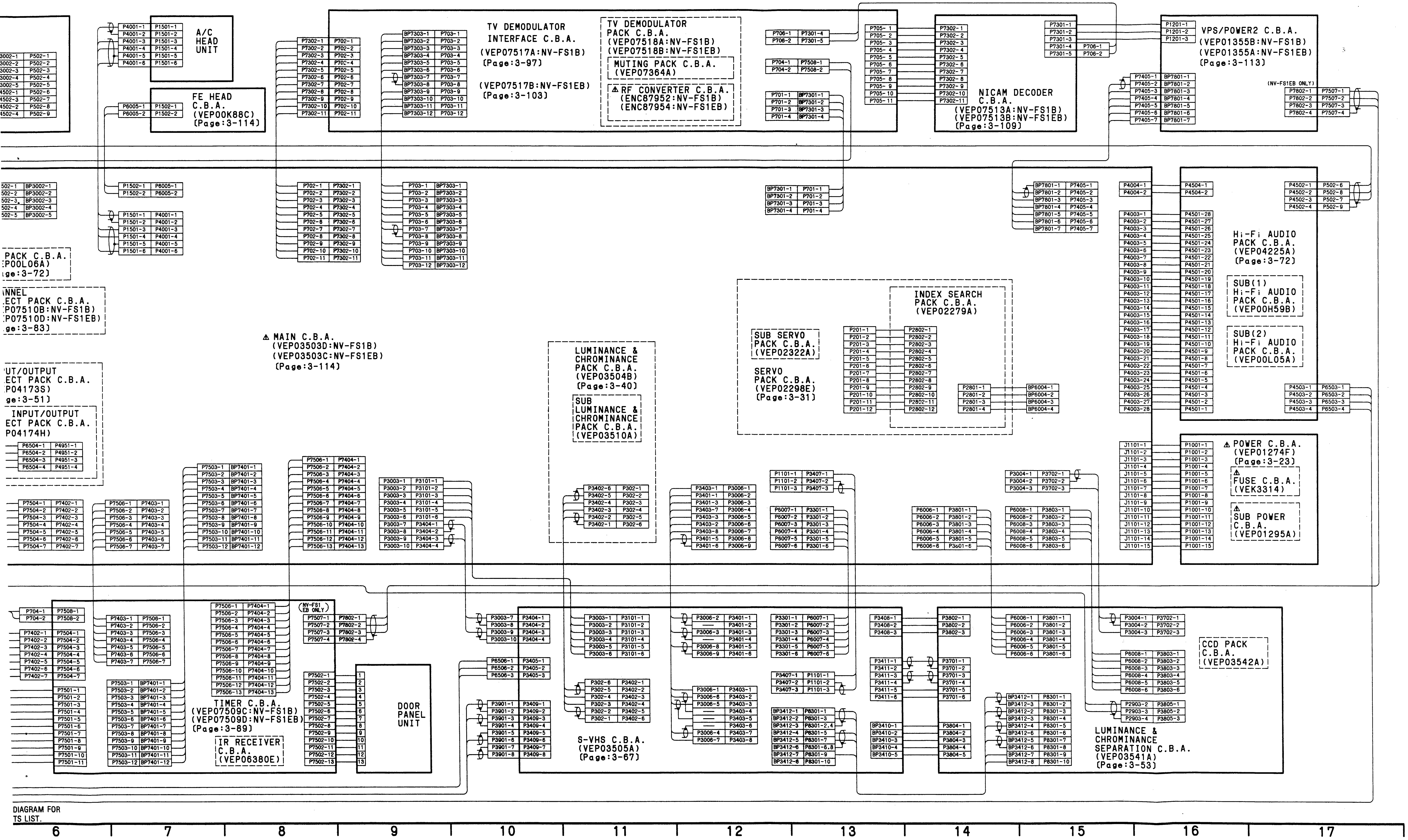
12

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.


A/C HEAD UNIT
FE HEAD C.B.A. (VEP00K88C) (Page:3-114)
TV DEMODULATOR INTERFACE C.B.A. (VEP07517A:NV-FS1B) (Page:3-97) (VEP07517B:NV-FS1EB) (Page:3-103)
TV DEMODULATOR PACK C.B.A. (VEP07518A:NV-FS1B) (VEP07518B:NV-FS1EB)
MUTING PACK C.B.A. (VEP07364A)
⚠ RF CONVERTER C.B.A. (ENC87952:NV-FS1B) (ENC87954:NV-FS1EB)
NICAM DECODER C.B.A. (VEP07513A:NV-FS1B) (VEP07513B:NV-FS1EB) (Page:3-109)
VPS/POWER2 C.B.A. (VEP01355B:NV-FS1B) (VEP01355A:NV-FS1EB) (Page:3-113)
(NV-FS1EB ONLY)
PACK C.B.A. (P00L06A) (Page:3-72)
NNEL ECT PACK C.B.A. P07510B:NV-FS1B) P07510D:NV-FS1EB) ge:3-83)
⚠ MAIN C.B.A. (VEP03503D:NV-FS1B) (VEP03503C:NV-FS1EB) (Page:3-114)
UT/OUTPUT ECT PACK C.B.A. P04173S) ge:3-51)
INPUT/OUTPUT ECT PACK C.B.A. P04174H)
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SUB LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A)
SUB SERVO PACK C.B.A. (VEP02322A)
SERVO PACK C.B.A. (VEP02298E) (Page:3-31)
INDEX SEARCH PACK C.B.A. (VEP02279A)
Hi-Fi AUDIO PACK C.B.A. (VEP04225A) (Page:3-72)
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SUB(2) Hi-Fi AUDIO PACK C.B.A. (VEP00L05A)
⚠ POWER C.B.A. (VEP01274F) (Page:3-23)
⚠ FUSE C.B.A. (VEK3314)
⚠ SUB POWER C.B.A. (VEP01295A)
(NV-FS1 EB ONLY)
TIMER C.B.A. (VEP07509C:NV-FS1B) (VEP07509D:NV-FS1EB) (Page:3-89)
IR RECEIVER C.B.A. (VEP06380E)
DOOR PANEL UNIT
S-VHS C.B.A. (VEP03505A) (Page:3-67)
CCD PACK C.B.A. (VEP03542A)
LUMINANCE & CHROMINANCE SEPARATION C.B.A. (VEP03541A) (Page:3-53)
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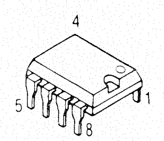
17

DIAGRAM FOR
TS LIST.

Next Page:
ICs & TRs INFORMATION Section

3-50. ICs & TRs INFORMATION

GENERAL CIRCUIT PARTS



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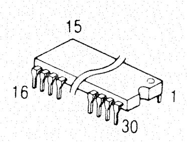

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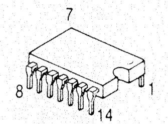

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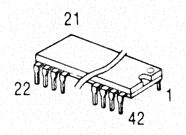

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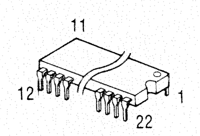

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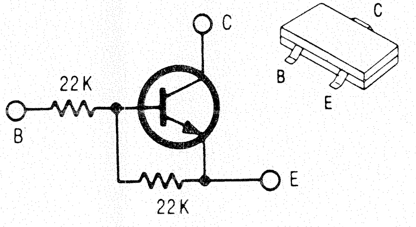
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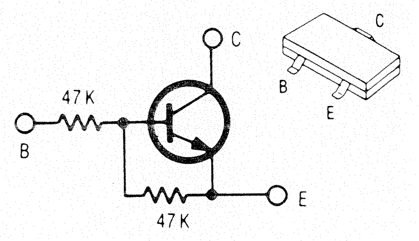
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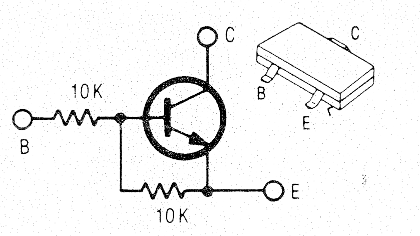
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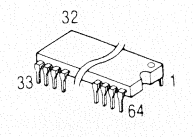

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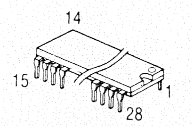

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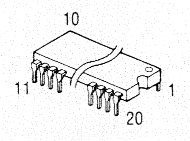

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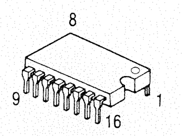

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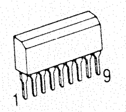

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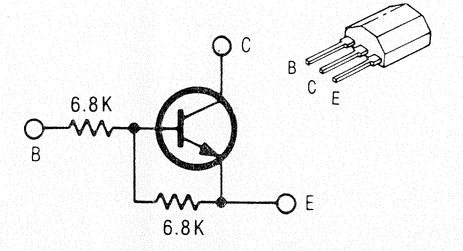
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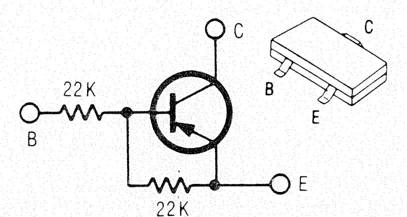
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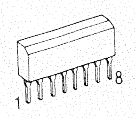

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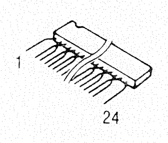

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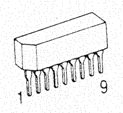

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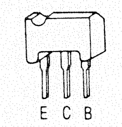

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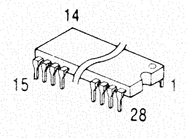

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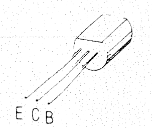

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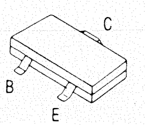

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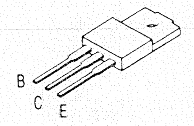

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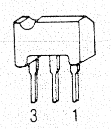

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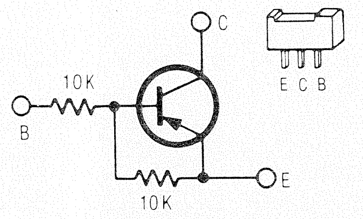
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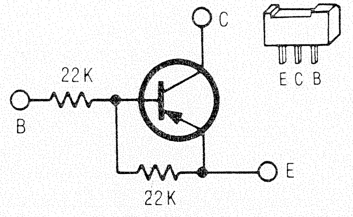
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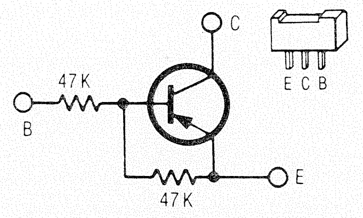
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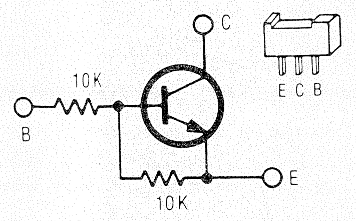
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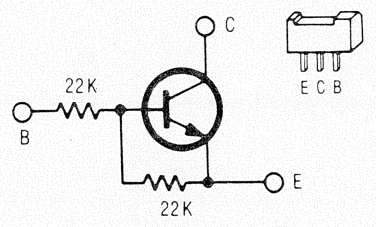
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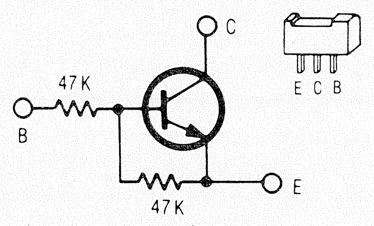
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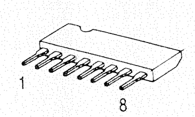

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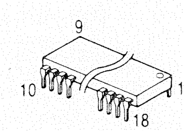

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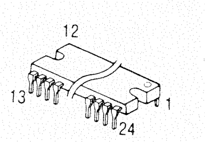

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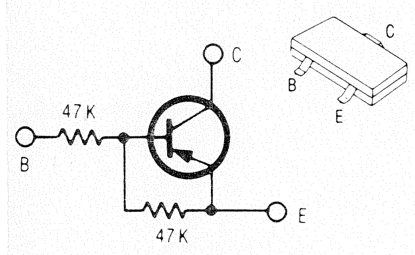
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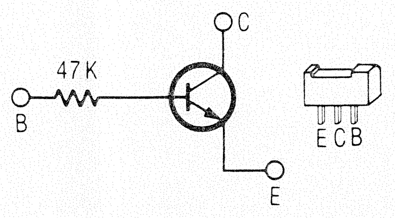

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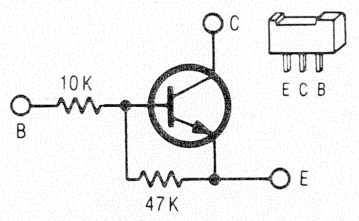
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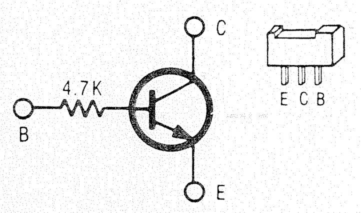

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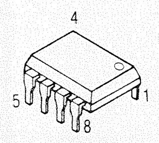

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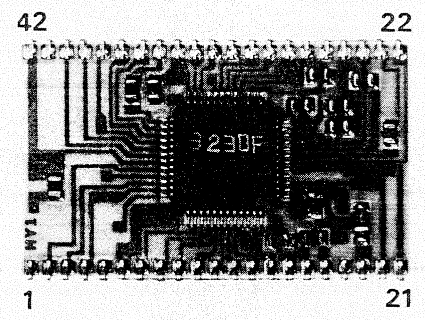

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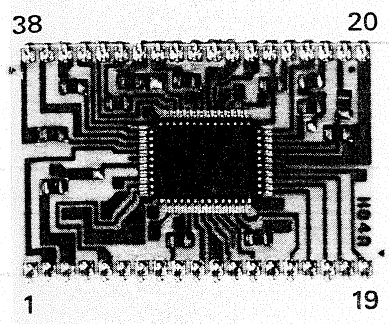

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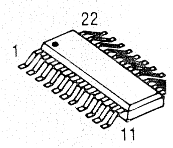

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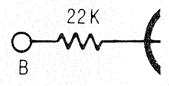

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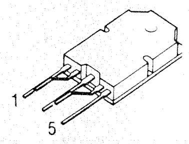

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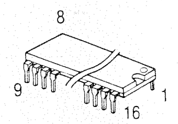

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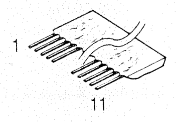

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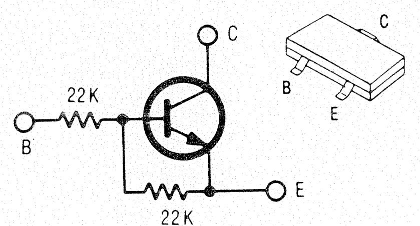
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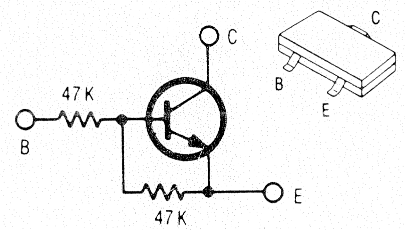
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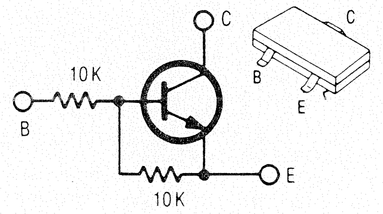
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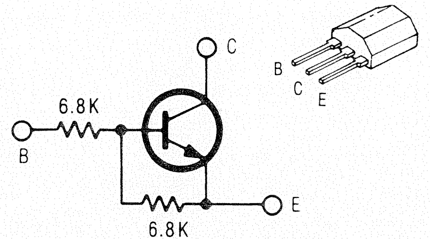
C
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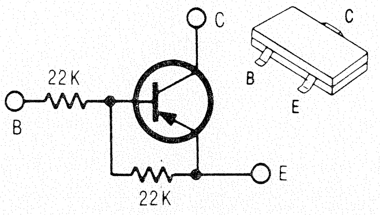
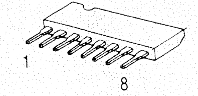
B
C
E

2SD1676


C
B
E
22K
22K
B
C
E

UN2112

SERVO Section



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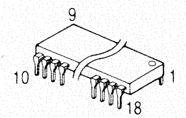

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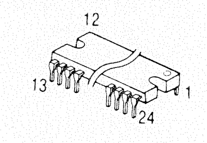

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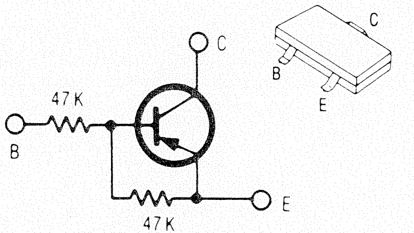
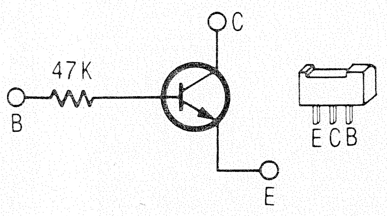

C
B
E
47K
47K
B
C
E

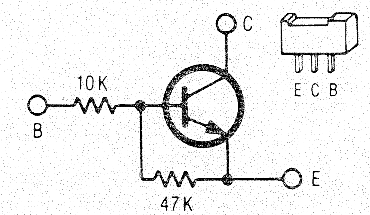
DTA144EK

SYSTEM CONTROL Section



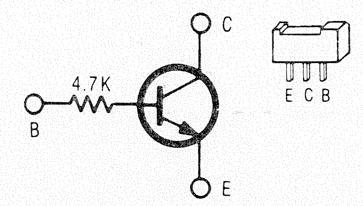
UN1210

LUMINANCE & CHROMINANCE Section


C
B
E
10K
47K
E C B

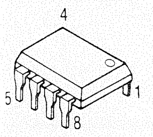
DTC114YA

AUIDO Section

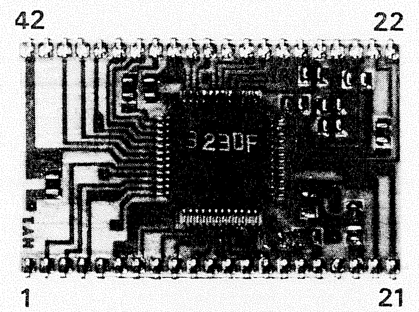


DTC143TA

LUMINANCE & CHROMINANCE PACK



MSM6965-3RS



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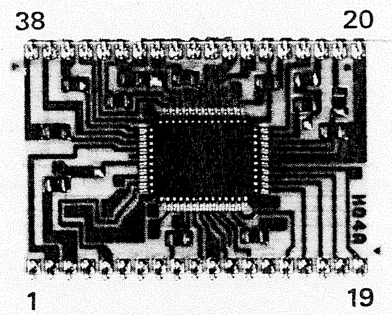
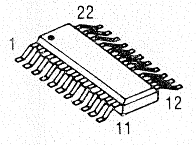


VEFH04A

HEAD AMP



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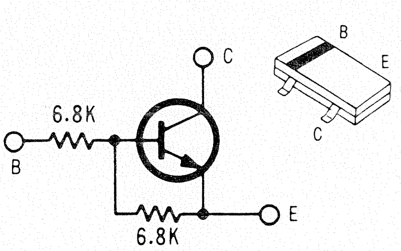
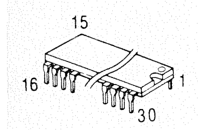

C
B
E
6.8K
6.8K
B
E
C

2SD1777CI

Hi-Fi AUDIO PACK



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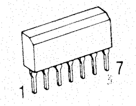
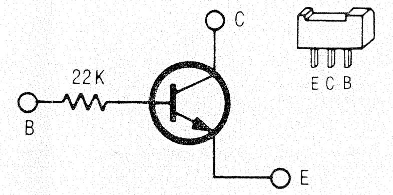


TA7302P

TV DEMODULATOR



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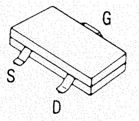
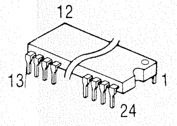


2SK198

NICAM DECODER



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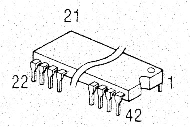
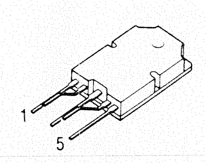


TC6011N

POWER



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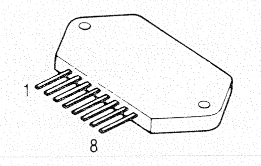
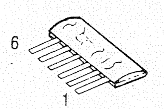


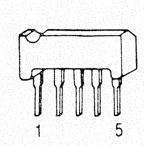
STK5339

OPERATION



VCR0172

INPUT/OUTPUT SELECT PACK



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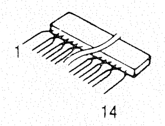
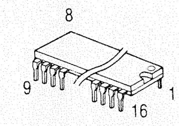
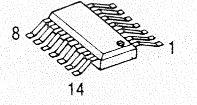


M51132L

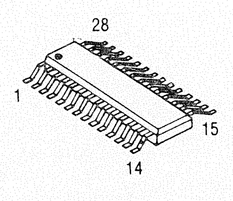
LUMINANCE & CHROMINANCE SEPARATION



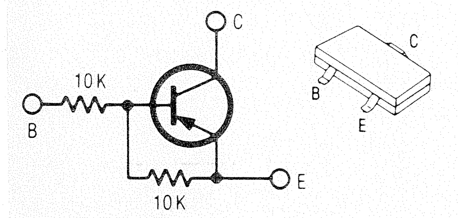
M52055P
MN1550VNT



µPD74HC00G

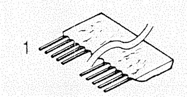


BU3781F

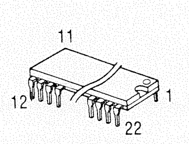

C
B
E
10K
10K
B
C
E

UN2111

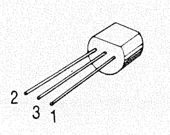
S-VHS



VCR0185A



µPC1517CA



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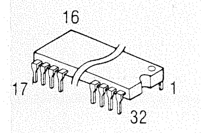
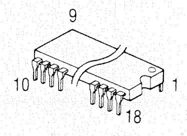


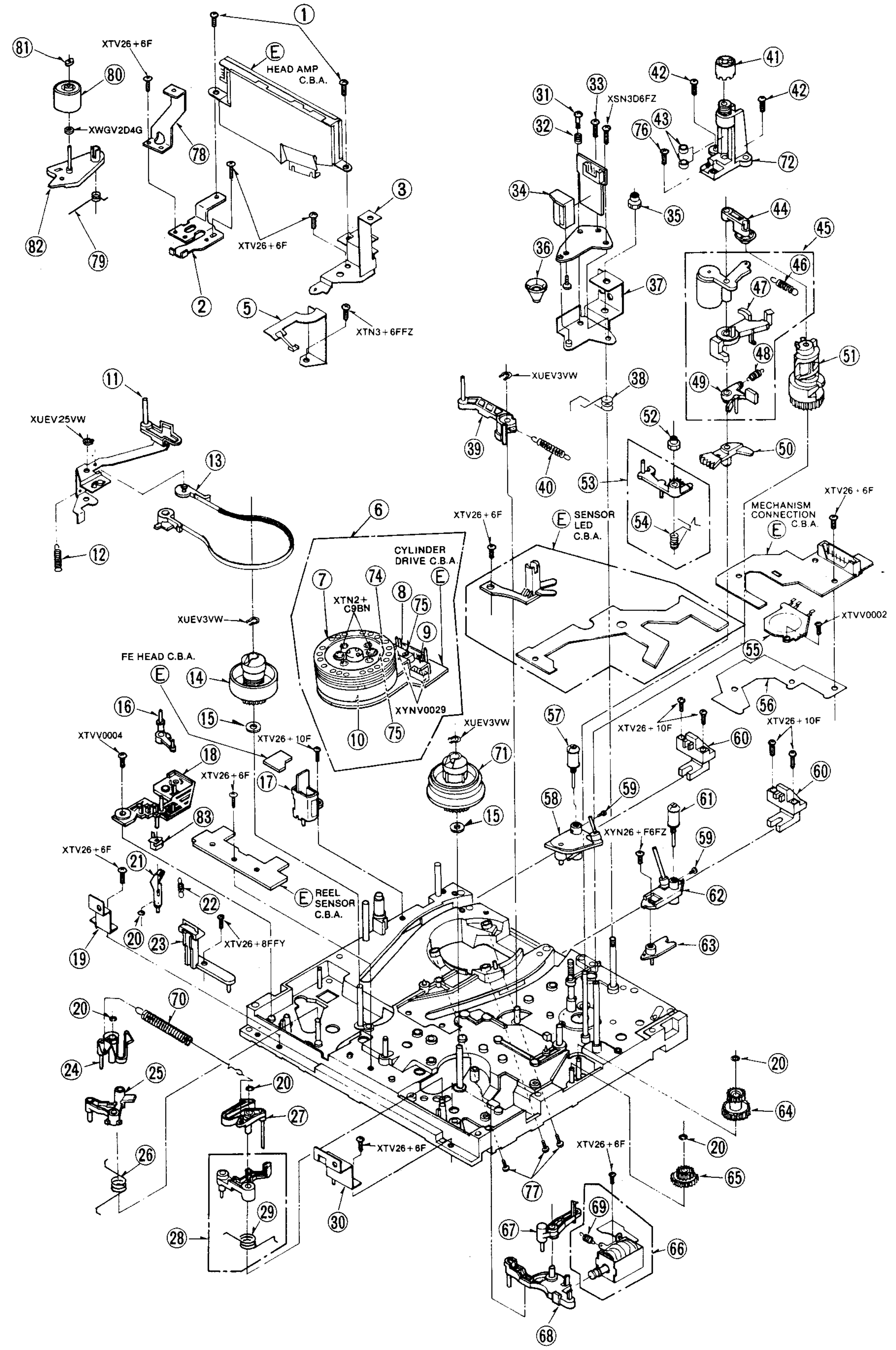
M51647SP



VC2031DP

SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW ❶ CHASSIS PARTS SECTION (1)



1
81
XTV26+6F
E
HEAD AMP C.B.A.
80
XWGV2D4G
78
82
79
XTV26+6F
2
3
5
XTN3+6FFZ
41
42
33
31
XSN3D6FZ
42
32
43
76
72
34
35
44
45
36
46
47
37
48
49
51
XUEV3VW
38
39
40
50
52
53
11
XUEV25VW
13
12
6
XTV26+6F
E
SENSOR LED C.B.A.
54
MECHANISM CONNECTION C.B.A.
E
XTV26+6F
CYLINDER DRIVE C.B.A.
7
74
E
XTN2+C9BN
8
75
9
XTVV0002
XUEV3VW
FE HEAD C.B.A.
E
14
55
10
XYNV0029
75
56
15
16
XTVV0004
XTV26+10F
57
XTV26+10F
60
XTV26+10F
XUEV3VW
71
60
18
XTV26+6F
17
59
58
61
83
15
XYN26+F6FZ
59
XTV26+6F
21
22
E
REEL SENSOR C.B.A.
62
19
20
23
XTV26+8FFY
63
20
70
24
25
20
20
27
64
26
XTV26+6F
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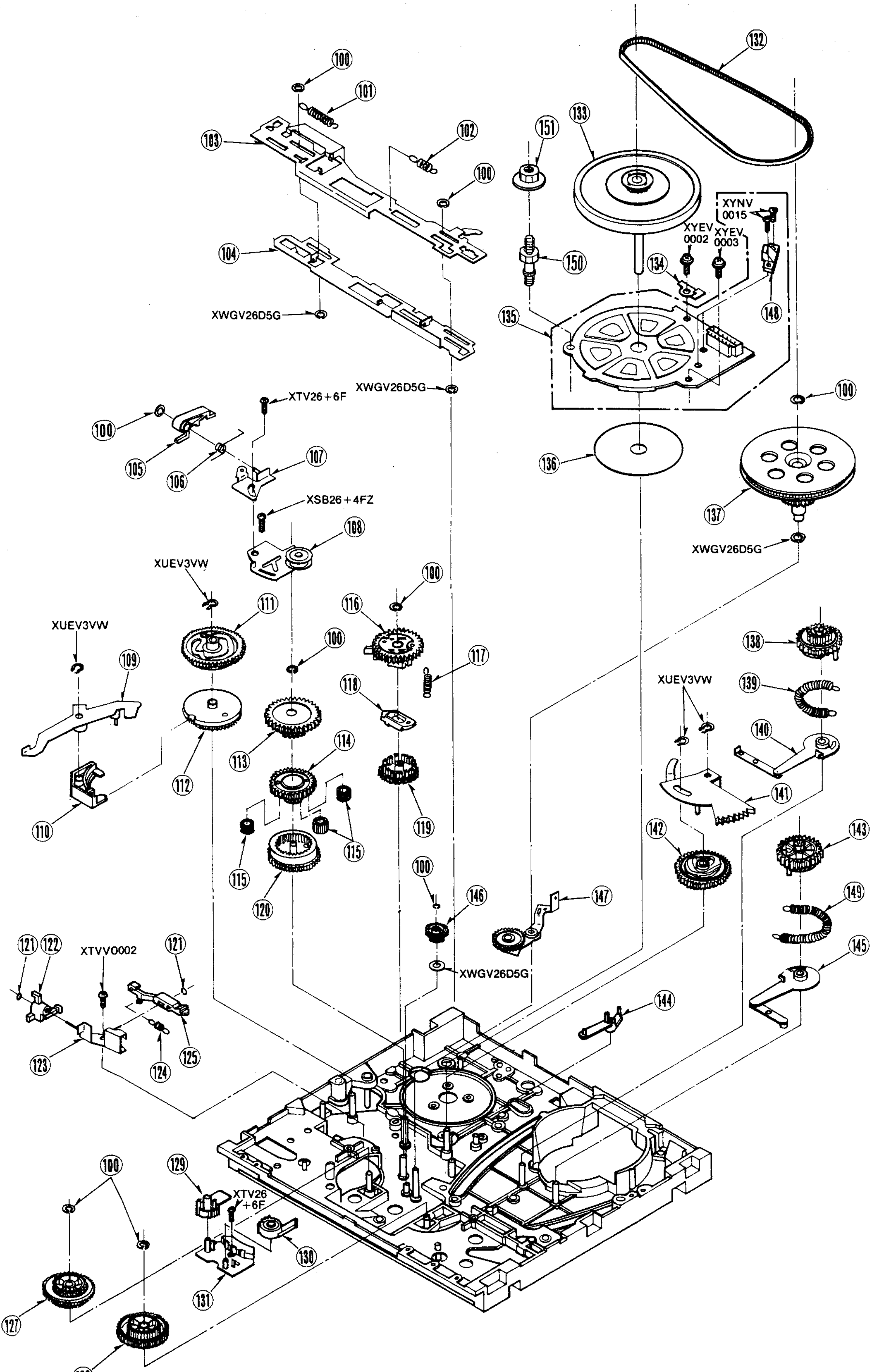
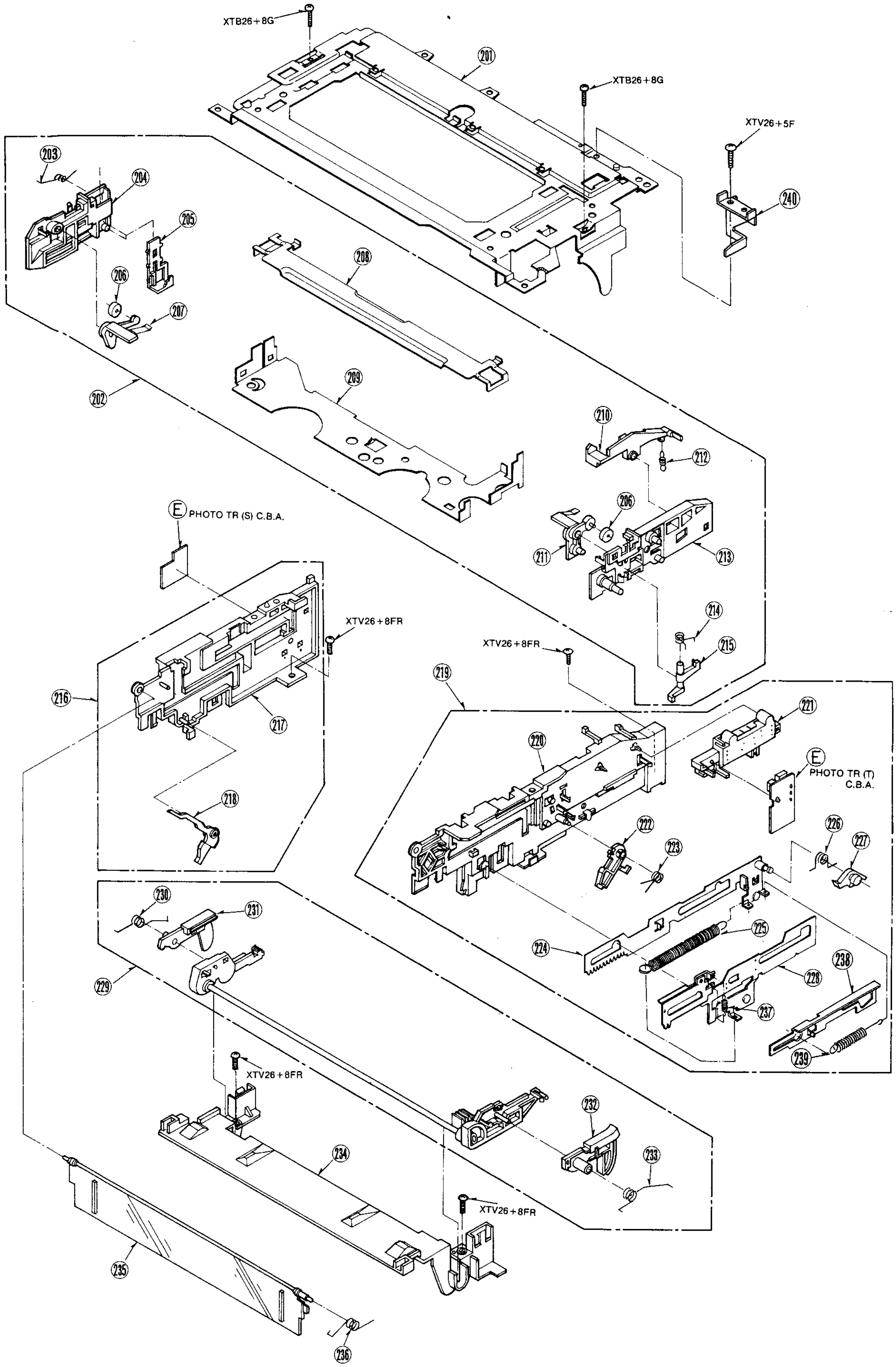
XTV26+6F
30
77
65
28
29
69
67
66
68

❷ CHASSIS PARTS SECTION (2)



100
101
102
103
100
104
XWGV26D5G
132
133
151
XYNV 0015
XYEV 0002
XYEV 0003
150
134
148
135
XWGV26D5G
XTV26+6F
100
105
106
107
XSB26+4FZ
108
136
100
137
XWGV26D5G
XUEV3VW
111
116
100
100
XUEV3VW
109
117
118
113
112
114
110
119
115
115
120
138
XUEV3VW
139
140
141
142
143
149
145
100
146
147
XWGV26D5G
121
122
XTVV0002
121
123
124
125
144
100
129
XTV26 +6F
130
131
127
128

❸ CASSETTE UP MECHANISM SECTION


XTB26+8G
201
XTB26+8G
XTV26+5F
240
203
204
205
206
207
208
209
202
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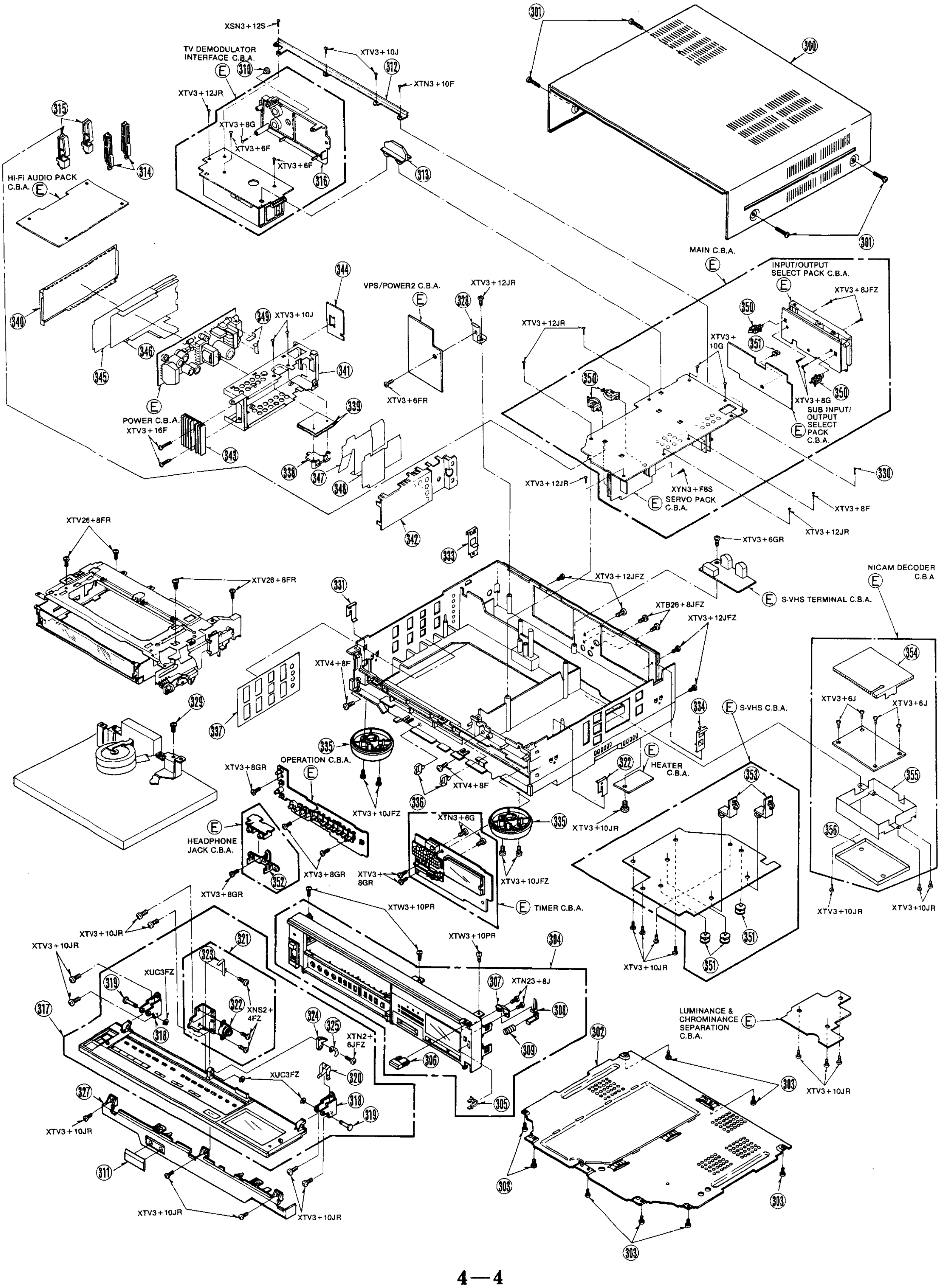
212
206
211
213
214
215
E PHOTO TR (S) C.B.A.
XTV26+8FR
216
217
218
XTV26+8FR
219
220
221
E PHOTO TR (T) C.B.A.
222
223
226
227
224
225
228
238
237
239
230
231
229
XTV26+8FR
232
233
234
XTV26+8FR
235
236

❹ CASING PARTS SECTION



XSN3+12S
TV DEMODULATOR INTERFACE C.B.A.
E
310
XTV3+10J
312
XTN3+10F
XTV3+12JR
XTV3+8G
XTV3+6F
XTV3+6F
316
313
315
314
HI-Fi AUDIO PACK C.B.A.
301
300
301
MAIN C.B.A.
INPUT/OUTPUT SELECT PACK C.B.A.
XTV3+8JFZ
344
VPS/POWER2 C.B.A.
XTV3+12JR
328
340
349
XTV3+10J
346
341
345
XTV3+6FR
XTV3+12JR
XTV3+10G
350
351
350
350
XTV3+8G
SUB INPUT/OUTPUT SELECT PACK C.B.A.
339
POWER C.B.A.
XTV3+16F
343
338
347
348
XTV3+12JR
XYN3+F8S
SERVO PACK C.B.A.
330
XTV3+8F
XTV3+12JR
342
333
XTV3+6GR
XTV26+8FR
XTV26+8FR
331
XTV3+12JFZ
XTB26+8JFZ
XTV3+12JFZ
NICAM DECODER C.B.A.
S-VHS TERMINAL C.B.A.
XTV4+8F
354
337
329
334
S-VHS C.B.A.
XTV3+6J
XTV3+6J
335
OPERATION C.B.A.
XTV3+8GR
322
HEATER C.B.A.
353
355
336
XTV4+8F
XTV3+10JFZ
XTN3+6G
335
XTV3+10JR
356
HEADPHONE JACK C.B.A.
352
XTV3+8GR
XTV3+8GR
XTV3+10JFZ
TIMER C.B.A.
XTV3+10JR
XTV3+10JR
XTW3+10PR
XTV3+10JR
XTV3+10JR
321
XTW3+10PR
304
351
351
XTV3+10JR
323
XUC3FZ
319
322
XNS2+4FZ
307
XTN23+8J
308
317
318
324
325
XTN2+6JFZ
309
302
LUMINANCE & CHROMINANCE SEPARATION C.B.A.
306
XUC3FZ
320
318
303
XTV3+10JR
327
319
305
XTV3+10JR
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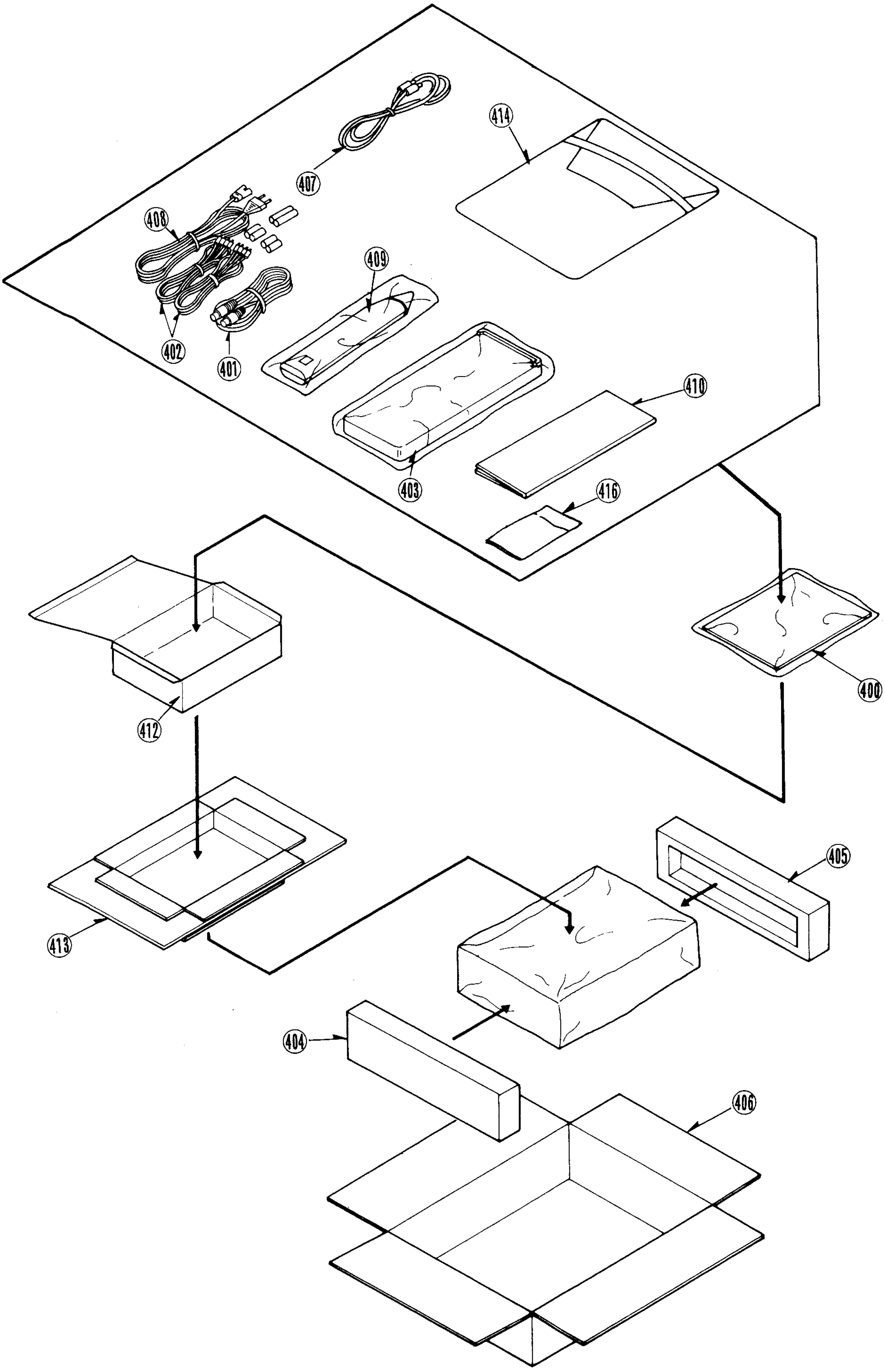
303
303
XTV3+10JR
XTV3+10JR
303

❺ PACKING PARTS SECTION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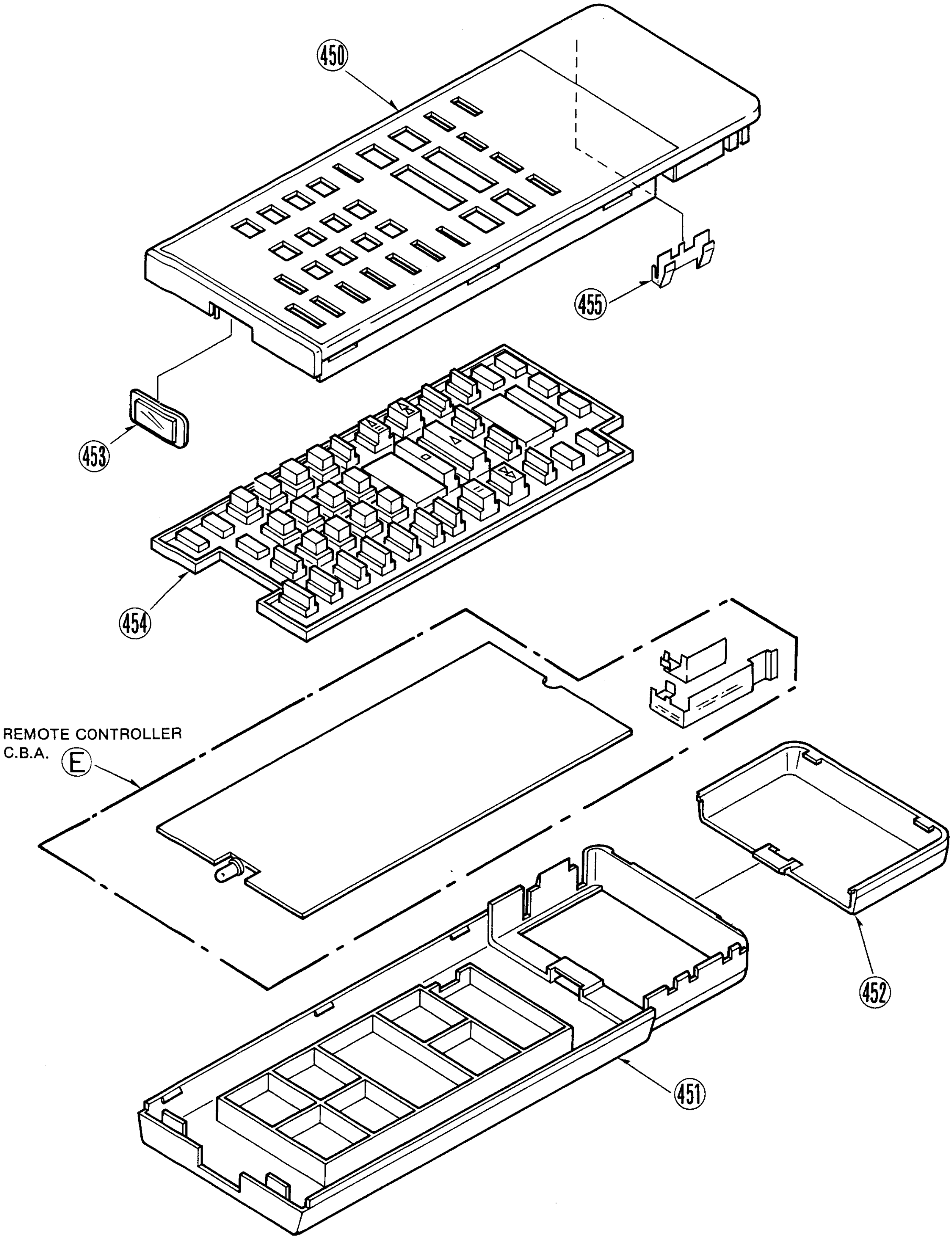
406

❻ REMOTE CONTROLLER UNIT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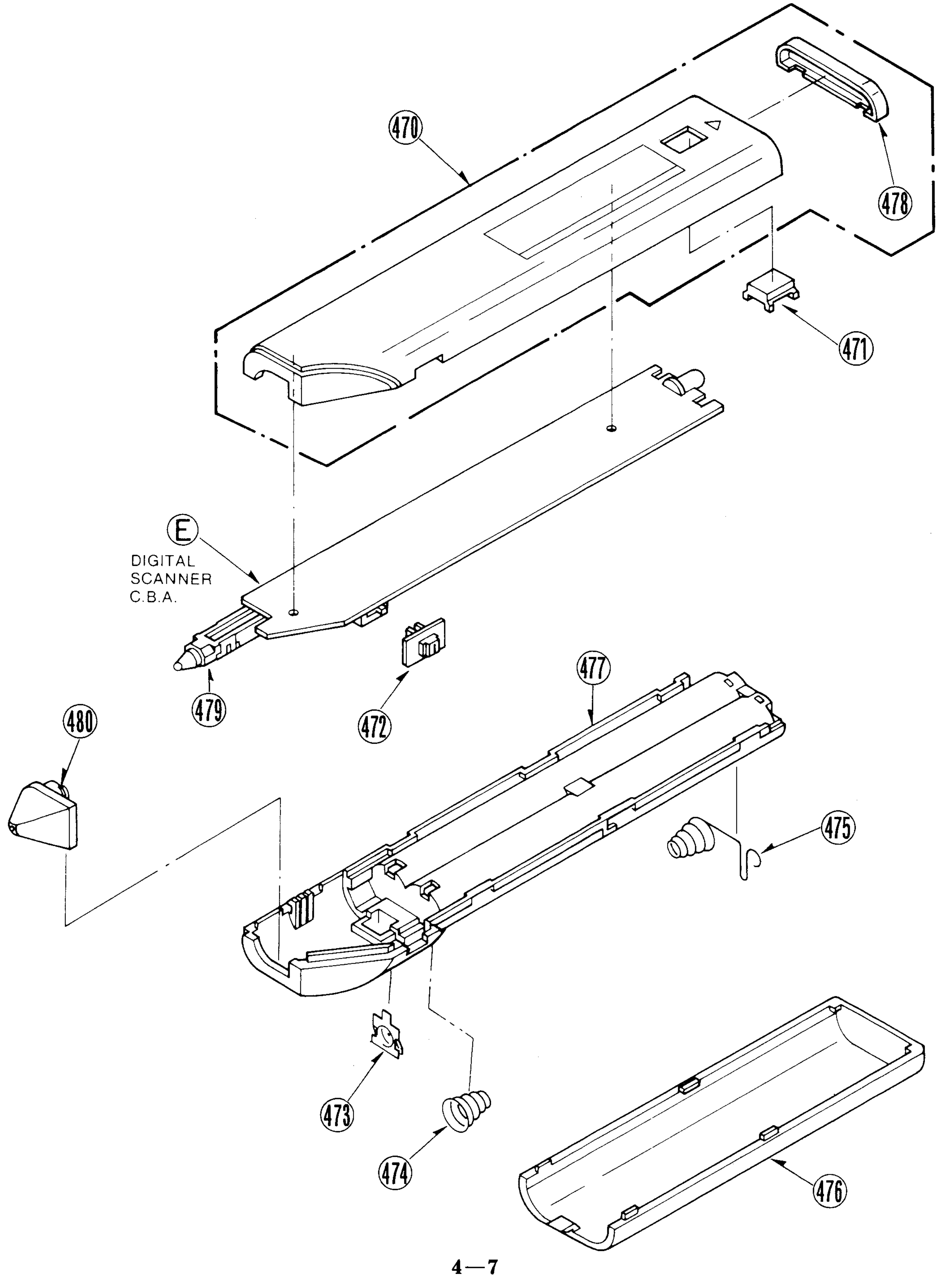
455
453
454
REMOTE CONTROLLER C.B.A. Ⓔ
452
451

❼ DIGITAL SCANNER


470
478
471
Ⓔ
DIGITAL
SCANNER
C.B.A.
479
472
477
480
475
473
474
476

Memo

ORDER NO. VRD8809M164
(Date of issue: SEP., 1988)

PARTS LIST

MODEL NO.: NV-FS1B/EB

1. NV-FS1B/EB Mechanical Replacement Parts List

* This parts list is detachable from the manual.

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0141	HEAD AMP SET SCREW	2	
2(1)		VMA7174	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
5(1)		VXA2702	EARTH PLATE UNIT	1	
6(1)		VEG0668	CYLINDER UNIT	1	<!>
7(1)		VEH0415	UPPER CYLINDER UNIT	1	
8(1)		VRH0015	HEATER	1	
9(1)		VMA6884	MAIN HOLDER UNIT	1	
10(1)		VSC2188	CYLINDER C.B.A.SHIELD PLATE	1	
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0225	TENSION BAND UNIT	1	
14(1)		VXR0145	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER (0.5mm)	2	
15(1)		VMX1239	REEL WASHER (0.3mm)	2	
15(1)		VMX1238	REEL WASHER (0.2mm)	2	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	5	
21(1)		VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0350	SAFETY SW	1	
24(1)		VXZ0229	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0228	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0231	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VBR0132	A/C HEAD	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0050	ADJUST NUT	1	
37(1)		VXA2675	HEAD BASE UNIT	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1480	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	2	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1748	PRESSURE ROLLER UNIT	1	
46(1)		VMB1568	PIN PRESSURE SPRING	1	
47(1)		VML1873	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE	1	
			SPRING		
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0357	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHN0023	M3 NYLON NUT	1	
53(1)		VXL1485	P5 UNIT	1	
54(1)		VMB1554	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
56(1)		VSC1851	SHIELD PLATE	1	
57(1)		VXP0863	ROLLER POST UNIT	1	
58(1)		VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP0764	ROLLER POST UNIT	1	
62(1)		VXA3213	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0332	CONNECTION GEAR	1	
66(1)		VEK3347	SOLENOID UNIT	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML2048	SOLENOID LEVER (1) UNIT	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB1565	MAIN BRAKE SPRING	1	
71(1)		VXR0146	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
74(1)		VSC1843	HEAT SINK PLATE	1	
75(1)		VHD0329	HEAT SINK SCREW	2	
76(1)		VHD0374	HOUSING SCREW	1	
77(1)		VHD0342	CYLINDER MOUNT SCREW	3	
78(1)		VMA7175	SHIELD MOUNT ANGLE	1	
79(1)		VMB1741	IMPEDANCE ARM SPRING	1	
80(1)		VDP1158	IMPEDANCE ROLLER	1	
81(1)		VMX1088	ROLLER STOPPER	1	
82(1)		VXL1646	IMPEDANCE ROLLER ARM(2)UNIT	1	
83(1)		VMB1733	LEAF SPRING	1	
100(2)		VMX1079	CUT WASHER	9	
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA2701	MAIN LEVER (1) UNIT	1	
104(2)		VMM0160	SUB LEVER	1	
105(2)		VXL1500	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA2707	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA2674	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0346	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0349	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)		VDG0445	SUPPLY REEL GEAR	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP0777	ROTOR UNIT	1	
134(2)		VMA6998	ROTOR STOPPER	1	
135(2)		VEK2944	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0917	CENTRE PULLEY UNIT	1	
138(2)		VDG0420	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3144	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0336	INTERMEDIATE GEAR	1	
147(2)		VXL1490	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
150(2)		VHD0431	STATOR SPACER SCREW	1	
151(2)		VHN0102	STOPPER NUT	1	
201(3)		VMA7223	TOP PLATE	1	
202(3)		VXA2679	CASSETTE HOLDER UNIT	1	
203(3)		VMB1573	MOUNT LEVER SPRING	1	
204(3)		VMD0919	HOLDER GUIDE (L)	1	
205(3)		VMM0163	MOUNT LEVER	1	
206(3)		VDP1077	ROLLER	2	
207(3)		VML1883	PRESSURE LEVER (L)	1	
208(3)		VMA6902	HOLDER ANGLE	1	
209(3)		VMA7937	CASSETTE HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
210(3)		VML1882	OPENER LEVER	1	
211(3)		VML1884	PRESSURE LEVER (R)	1	
212(3)		VMB1584	OPENER LEVER SPRING	1	
213(3)		VMD0920	HOLDER GUIDE (R)	1	
214(3)		VMB1576	RELEASE SPRING	1	
215(3)		VML1881	RELEASE LEVER	1	
216(3)		VXA2676	SIDE PLATE (L) UNIT	1	
217(3)		VMD0917	SIDE PLATE (L)	1	
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA3015	SIDE PLATE (R) UNIT	1	
220(3)		VMD0918	SIDE PLATE (R)	1	
221(3)		VSS0176	SLIDE SW	1	
222(3)		VML1886	DOWN SUPPORT LEVER	1	
223(3)		VMB1575	DOWN SUPPORT SPRING	1	
224(3)		VXA3148	RACK (A)(1) UNIT	1	
225(3)		VMB1778	CLUTCH SPRING	1	
226(3)		VMB1772	LOCK SPRING	1	
227(3)		VML1885	LOCK LEVER	1	
228(3)		VXA3147	RACK (B) UNIT	1	
229(3)		VXP0987	MAIN SHAFT UNIT	1	
230(3)		VMB1836	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1837	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF0848	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
237(3)		VMB1780	RACK (C) SPRING	1	
238(3)		VMA7237	CONNECTION ROD	1	
239(3)		VMB1779	CONNECTION ROD SPRING	1	
240(3)		VMA7224	CASSETTE HOLDER ANGLE	1	
300(4)		VYP2461	TOP PANEL UNIT	1	
301(4)		VHD0378	TOP PANEL SCREW	4	
302(4)		VKU0247	BOTTOM PLATE	1	
303(4)		VHD0059	BOTTOM PLATE SCREW	8	
304(4)		VYP2496	FRONT PANEL UNIT	1	
305(4)		VGQ1442	DOOR LOCK PIECE	1	
306(4)		VGU4367	DOOR OPEN BUTTON	1	
307(4)		VJF0426	BUTTON LEVER HOLDER	1	
308(4)		VML1969	DOOR OPEN LEVER	1	
309(4)		VMB1398	OPEN LEVER SPRING	1	
310(4)		VMG0272	RF CONVERTER BUSHING	1	
311(4)		VGK1622	JACK COVER	1	
312(4)		VMP1059	MAIN C.B.A.SUPPORT ANGLE	1	
313(4)		VKC0083	HINGE CLIP	1	
314(4)		VJF0403	HI-FI AUDIO SUDDLE HINGE	2	
315(4)		VKC0294	HI-FI AUDIO HINGE CLIP	2	
316(4)		VJH0418	RF & ANT BOARD	1	
317(4)		VYF1290	DOOR PANEL UNIT	1	NV-FS1B
317(4)		VYF1299	DOOR PANEL UNIT	1	NV-FS1EB
318(4)		VMP1141	DOOR PANEL ANGLE(A)	2	
319(4)		VMS3406	DOOR SHAFT(A)	2	
320(4)		VMC0329	DOOR PANEL SPRING(A)	1	
321(4)		VXA2830	DOOR PANEL ANGLE(B) UNIT	1	
322(4)		VDG0391	DAMPER GEAR	1	
323(4)		VMC0301	DOOR PANEL SPRING(B)	1	
324(4)		VDG0390	DOOR PANEL GEAR	1	
325(4)		VMC0283	EARTH SPRING(C)	1	
327(4)		VYP1819	FRONT LOWER PANEL UNIT	1	
328(4)		VMP1937	VPS HOLDER ANGLE	1	
329(4)		VHD0168	CHASSIS MOUNT SCREW	1	
330(4)		VHD0268	MAIN C.B.A. MOUNT SCREW	1	
331(4)		VMP1108	TOP HOLDER ANGLE(FL)	1	
332(4)		VMP1109	TOP HOLDER ANGLE(FR)	1	
333(4)		VMP1110	TOP HOLDER ANGLE(RL)	1	
334(4)		VMP1166	TOP HOLDER ANGLE(RR)	1	
335(4)		VYQ0019	LEG UNIT	2	
336(4)		VJF0442	WIRE SADDLE	2	
337(4)		VXA2885	BCI SHIELD PLATE UNIT	1	
338(4)		VGQ1109	TR.HOLDER	1	
339(4)		VMZ0876	INSULATION SHEET	2	
340(4)		VSC1827	SHIELD CASE(L)	1	
341(4)		VSC1924	SHIELD CASE(MAIN)	1	
342(4)		VSC1829	SHIELD CASE(R)	1	
343(4)		VSC1933	HEAT SINK	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
344(4)		VGH1127	POWER NAME PLATE	1	
345(4)		VMZ0902	BARRIER(A)	1	<!>
346(4)		VMZ0916	BARRIER(B)	1	<!>
347(4)		VMZ0917	BARRIER(C)	1	<!>
348(4)		VMZ0918	BARRIER(D)	1	<!>
349(4)		VMZ0948	BARRIER(E)	2	<!>
350(4)		VJF0236	C.B. SUPPORTER	4	
351(4)		VMX0985	C.B. SPACER	4	
352(4)		VJF0427	JACK SUPPORTER	1	
353(4)		VKC0271	S-VHS C.B.A. HINGE	2	
354(4)		VSC2618	DECODER SHIELD (TOP)	1	
355(4)		VSC2616	DECODER SHIELD (MAIN)	1	
356(4)		VSC2617	DECODER SHIELD (BOTTOM)	1	
400(5)		VQT2821	OPERATING INSTRUCTIONS	1	NV-FS1B<!>
			(ENGLISH)		
400(5)		VQT2822	OPERATING INSTRUCTIONS	1	NV-FS1EB<!>
			(ENGLISH/GERMAN/FRENCE)		
400(5)		VQT2823	OPERATING INSTRUCTIONS	1	NV-FS1EB<!>
			(SWEDISH/DANISH/FINNISH)		
401(5)		VJA0376	DIN RF CABLE	1	
402(5)		VJA0231	AUDIO CABLE	2	
403(5)		VEQ0836	REMOTE CONTROLLER UNIT	1	NV-FS1EB
403(5)		VEQ0839	REMOTE CONTROLLER UNIT	1	NV-FS1B
404(5)		VPN1883	CUSHION (L)	1	
405(5)		VPN1882	CUSHION (R)	1	
406(5)		VPG4390	PACKING CASE	1	NV-FS1EB
406(5)		VPG4389	PACKING CASE	1	NV-FS1B
407(5)		VJA0453	S-VIDEO 4P CABLE	1	
408(5)		VJA0449	AC CORD	1	NV-FS1EB<!>
408(5)		VJA0445	AC CORD	1	NV-FS1B<!>
409(5)		VEQ0691	DIGITAL SCANNER	1	NV-FS1EB
409(5)		VEQ0692	DIGITAL SCANNER	1	NV-FS1B
410(5)		VQC1232	PROGRAMME SHEET	1	NV-FS1EB
410(5)		VQC1218	PROGRAMME SHEET	1	NV-FS1B
412(5)		VPK0688	ACCESSORIES PACKING CASE	1	
413(5)		VPN1822	ACCESORIES CUSHION	1	
414(5)		VFC0115	DIGITAL SCANNER CASE	1	
416(5)		VQF2115	CLEANING BRUSH	1	
450(6)		VYK2241	TOP CASE UNIT	1	NV-FS1EB
450(6)		VYK2244	TOP CASE UNIT	1	NV-FS1B
451(6)		VKM1133	BOTTOM CASE	1	
452(6)		VKF0971	BATTERY COVER	1	
453(6)		VKW0878	IR WINDOW	1	
454(6)		VSP0378	RUBBER CONTACT	1	NV-FS1EB
454(6)		VSP0379	RUBBER CONTACT	1	NV-FS1B
455(6)		VJR0185	ELECTRODE (COMMON)	1	
470(7)		VYK1992	TOP CASE UNIT	1	NV-FS1EB
470(7)		VYK1193	TOP CASE UNIT	1	NV-FS1B
471(7)		VGU4099	TRANSMISSION BUTTON	1	
472(7)		VGU4100	POWER SW KNOB	1	
473(7)		VJR0411	ELECTRODE (+)	1	
474(7)		VJR0412	ELECTRODE (-)	1	
475(7)		VJR0272	ELECTRODE (COM)	1	
476(7)		VKF1024	BATTERY CASE	1	
477(7)		VKM1331	BOTTOM CASE	1	
478(7)		VKW0940	SMOKE FILTER	1	
479(7)		VSQ0567	SENSOR UNIT	1	
480(7)		VKM1332	SENSOR CAP	1	
			JIG		
		VFJ8125H3F	VHS-ALIGNMENT TAPE (PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0387	TENSION POST ADJUSTMENT	1	
			PLATE		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0328	H-POSITION ADJ.	1	
			SCREWDRIVER		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK62	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0344	HEIGHT ADJUSTMENT JIG	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0283	SERVICE ALIGNMENT TOOL KIT	1	
		VFK0341	UPPER CYLINDER REMOVER	1	

2. NV-FS1B/EB Electrical Replacement Parts List

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'▮'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03503D	MAIN C.B.A. (SERVO,SYSTEM CONTROL, VIDEO)	1	NV-FS1B(NLA)<!> INCLUDING THE INPUT/OUTPUT SELECT PACK C.B.A.(VEP04173S),SUB INPUT/OUTPUT SELECT PACK C.B.A. (VEP04174H),INDEX SEARCH PACK C.B.A. (VEP02279A),SERVO PACK C.B.A. (VEP02298E),SUB SERVO PACK C.B.A. (VEP02322A),EQ PACK C.B.A.(VEP00L06A), LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B),SUB LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A),CHANNEL SELECT PACK C.B.A. (VEP07510B).
		VEP03503C	MAIN C.B.A. (SERVO,SYSTEM CONTROL, VIDEO)	1	NV-FS1EB(NLA)<!> INCLUDING THE INPUT/OUTPUT SELECT PACK C.B.A.(VEP04173S),SUB INPUT/OUTPUT SELECT PACK C.B.A. (VEP04174H),INDEX SEARCH PACK C.B.A. (VEP02279A),SERVO PACK C.B.A. (VEP02298E),SUB SERVO PACK C.B.A. (VEP02322A),EQ PACK C.B.A.(VEP00L06A), LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03504B),SUB LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03510A),CHANNEL SELECT PACK C.B.A. (VEP07510D).
		VEP04173S	INPUT/OUTPUT SELECT PACK C.B.A.	1	(NLA)
		VEP04174H	SUB INPUT/OUTPUT SELECT PACK C.B.A.	1	(NLA)
		VEP02279A	INDEX SEARCH PACK C.B.A.	1	(NLA)
		VEP02298E	SERVO PACK C.B.A.	1	(NLA)
		VEP02322A	SUB SERVO PACK C.B.A.	1	(NLA)
		VEP00L06A	EQ PACK C.B.A.	1	(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03504B	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(NLA)
		VEP03510A	SUB LUMINANCE & CHROMINANCE PACK C.B.A.	1	(NLA)
		VEP07510B	CHANNEL SELECT PACK C.B.A.	1	NV-FS1B(NLA)
		VEP07510D	CHANNEL SELECT PACK C.B.A.	1	NV-FS1EB(NLA)
		VEP04225A	HI-FI AUDIO PACK C.B.A.	1	(NLA) INCLUDING THE SUB(1) HI-FI AUDIO PACK C.B.A.(VEP00H59B), SUB(2) HI-FI AUDIO PACK C.B.A. (VEP00L05A).
		VEP00H59B	SUB(1) HI-FI AUDIO PACK C.B.A.	1	(NLA)
		VEP00L05A	SUB(2) HI-FI AUDIO PACK C.B.A.	1	(NLA)
		VEP00J12B	HEAD PHONE JACK C.B.A.	1	(NLA)
		VEP00K04A	S-VHS TERMINAL C.B.A.	1	(NLA)
		VEP00N25A	HEATER C.B.A.	1	(NLA)
		VEP03505A	S-VHS C.B.A.	1	(NLA)
		VEP03541A	LUMINANCE/CHROMINANCE SEPARATION C.B.A.	1	(NLA) INCLUDING THE CCD PACK C.B.A. (VEP03542A).
		VEP03542A	CCD PACK C.B.A.	1	(NLA)
		VEP05111B	HEAD AMP C.B.A.	1	(NLA)
		VEP06474C	OPERATION C.B.A.	1	(NLA)
		VEP01355B	VPS/POWER 2 C.B.A.	1	NV-FS1B(NLA)
		VEP01355A	VPS/POWER 2 C.B.A.	1	NV-FS1EB(NLA)
		VEP07517A	TV DEMODULATOR INTERFACE C.B.A.	1	NV-FS1B(NLA) INCLUDING THE TV DEMODULATOR PACK C.B.A.(VEP07518A).
		VEP07517B	TV DEMODULATOR INTERFACE C.B.A.	1	NV-FS1EB(NLA) INCLUDING THE TV DEMODULATOR PACK C.B.A.(VEP07518B).

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP07518A	TV DEMODULATOR PACK C.B.A.	1	NV-FS1B(NLA)
			(TUNER/ARU SECTION,VIF/SIF		INCLUDING THE MUTING
			SECTION,SUB NICAM SECTION,		PACK C.B.A.
			MUTING SECTION)		(VEP07364A)
		VEP07518B	TV DEMODULATOR PACK C.B.A.	1	NV-FS1EB(NLA)
			(TUNER/ARU SECTION,VIF/SIF		INCLUDING THE MUTING
			SECTION,SUB NICAM SECTION,		PACK C.B.A.
			MUTING SECTION)		(VEP07364A)
		VEP07364A	MUTING PACK C.B.A.	1	(NLA)
		VEP07513A	NICAM DECODER C.B.A.	1	(NLA)
		VEP07509C	TIMER C.B.A.	1	NV-FS1B(NLA)
					INCLUDING THE IR
					RECEIVER C.B.A.
					(VEP06380E)
		VEP07509D	TIMER C.B.A.	1	NV-FS1EB(NLA)
					INCLUDING THE IR
					RECEIVER C.B.A.
					(VEP06380E)
		VEP06380E	IR RECEIVER C.B.A.	1	(NLA)
		VEP01274F	POWER C.B.A.	1	(NLA)<!>
					INCLUDING THE SUB
					POWER C.B.A.
					(VEP01295A).
		VEP01295A	SUB POWER C.B.A.	1	(NLA)
		VEP66039C	DIGITAL SCANNER C.B.A.	1	(NLA)
		VEP66030A	REMOTE CONTROLLER C.B.A.	1	(NLA)
		VEP00K88C	FE HEAD C.B.A.	1	(NLA)
		VEK3354	MECHANISM CONNECTION UNIT	1	(NLA)
		VEK3555	REEL SENSOR UNIT	1	(NLA)
		VXA2983	LED UNIT	1	(NLA)
		VEP00H35A	PHOTO TR.(T) C.B.A.	1	(NLA)
		VEP00K27A	PHOTO TR.(S) C.B.A.	1	(NLA)
		VEP00N22A	CYLINDER DRIVE C.B.A.	1	(NLA)
		ENC87952	RF CONVERTER UNIT	1	NV-FS1B<!>
	■	ENC87954	RF CONVERTER UNIT		NV-FS1EB<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		ENV87806F2	TUNER UNIT	1	NV-FS1B<!>
		ENV57817F1	TUNER UNIT	1	NV-FS1EB<!>
F1001		XBA2C16TB0	FUSE 250V 1.6A	1	<!>
F1002		XBA2C25TB0	FUSE 250V 2.5A	1	<!>
F1003		XBA2C16TB0	FUSE 250V 1.6A	1	<!>
		VWJ28AW150MM	FLEXIBLE CABLE 28P	1	P4501-P4003
		VWJ13AW150MM	FLEXIBLE CABLE 13P	1	P7404-P7506
	■	VEP03503D	MAIN C.B.A.		NV-FS1B(NLA)<!>
		VEP03503C			NV-FS1EB(NLA)<!>
BP2001		VJP1256	CONNECTOR (MALE)	1	
BP3001		VJP1260	CONNECTOR (MALE)	1	
BP3002		VJP1256	CONNECTOR (MALE)	1	
BP6001		VJP1396	CONNECTOR (MALE)	1	
BP6004		VJP1255	CONNECTOR (MALE)	1	
BP7301		VJP1255	CONNECTOR (MALE)	1	
BP7303		VJP1263	CONNECTOR (MALE)	1	
BP7401		VJP1263	CONNECTOR (MALE)	1	
BP7402		VJP1258	CONNECTOR (MALE)	1	
BP7405		VJP1258	CONNECTOR (MALE)	1	
			CAPACITORS		
C202		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C203		ECUX1H562KBN	CHIP 50V 5600P	1	
C204		ECEA1CN100SB	E.CAPACITOR 16V 10U	1	
C205		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C206,07		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C208,09		ECEA1HKN010	E.CAPACITOR 50V 1U	2	
C210		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C212		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C213		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C214		ECUX1H102KBN	CHIP 50V 1000P	1	
C215		ECEA1HKNR33	E.CAPACITOR 50V 0.33U	1	
C216		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C217		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C218		ECUX1H472KBN	CHIP 50V 4700P	1	
C219		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C221		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C222		ECUX1H562KBN	CHIP 50V 5600P	1	
C223		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C224,25		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C226		ECUX1H102KBN	CHIP 50V 1000P	1	
C227		ECUX1H332KBN	CHIP 50V 3300P	1	
C229		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C230		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C231		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C232		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C234		ECUX1H102KBN	CHIP 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C237		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C238		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C239		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C240		ECEA16M10	E.CAPACITOR 16V 10U	1	
C241		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C242,43		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C244		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C245		ECUX1H562KBN	CHIP 50V 5600P	1	
C246		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C247		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C248		ECUX1H102KBN	CHIP 50V 1000P	1	
C254		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C255		ECKF1H332KB	C.CAPACITOR 50V 3300P	1	
C258		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C261		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C262		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C271		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C281,82		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C284,85		ECUX1H220JCN	CHIP 50V 22P	2	
C286,87		ECUX1H180JCN	CHIP 50V 18P	2	
C301		ECEA1EKN2R2	E.CAPACITOR 25V 2.2U	1	
C302		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C303		ECUX1E104ZFN	CHIP 25V 0.1U	1	
C304		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C305		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C306		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C307		ECUX1H470JCN	CHIP 50V 47P	1	
C308		ECUX1H220JCN	CHIP 50V 22P	1	
C310		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311,12		ECUX1H180JCN	CHIP 50V 18P	2	
C313		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C314		ECUX1H560JCN	CHIP 50V 56P	1	
C315		ECUX1H390JCN	CHIP 50V 39P	1	
C316		ECUX1H820JCN	CHIP 50V 82P	1	
C317		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C321		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C322		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C324		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C325,26		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C327,28		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C329		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C331		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C332		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C333		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C334		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C335		ECUX1H680JCN	CHIP 50V 68P	1	
C336		ECUX1H101JCN	CHIP 50V 100P	1	
C337		ECUX1H270JCN	CHIP 50V 27P	1	
C338		ECUX1E104ZFN	CHIP 25V 0.1U	1	
C339		ECUX1H680JCN	CHIP 50V 68P	1	
C340		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C341		ECUX1H331JCN	CHIP 50V 330P	1	
C342-44		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C345		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C346		ECUM1E123KBN	C.CAPACITOR CH 25V 0.012U	1	
C347,48		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C349		ECUX1H470JCN	CHIP 50V 47P	1	
C351		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C352		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C353		ECUX1H330JCN	CHIP 50V 33P	1	
C354		ECUX1E104ZFN	CHIP 25V 0.1U	1	
C355		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C360		ECQB1H153JZ	P.CAPACITOR 50V 0.015U	1	
C362		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
C801,02		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C803		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C804,05		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C806		ECUX1H471KBN	CHIP 50V 470P	1	
C807		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C808		ECUX1H560JCN	CHIP 50V 56P	1	
C809,10		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C811		ECUX1H180JCN	CHIP 50V 18P	1	
C812		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C813		ECUX1H330JCN	CHIP 50V 33P	1	
C814		ECEA1AK101	E.CAPACITOR 10V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C815		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C817		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C818		ECUX1H471KBN	CHIP 50V 470P	1	
C819		ECUX1H820JCN	CHIP 50V 82P	1	
C820		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C821		ECEA1HFS4R7	E.CAPACITOR 50V 4.7U	1	
C823		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C824		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C825		ECUX1H101JCN	CHIP 50V 100P	1	
C826		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C827		ECUM1H050CCN	C.CAPACITOR CH 50V 5P	1	
C828		ECUX1H102KBN	CHIP 50V 1000P	1	
C829		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C830		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C831,32		ECUX1E104ZFN	CHIP 25V 0.1U	2	
C833		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C1101-03		ECEA0JU331	E.CAPACITOR 6.3V 330U	3	
C1105		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C1106		ECEA1CU101	E.CAPACITOR 16V 100U	1	
C1107		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C1108		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C1109		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2001-03		ECQB1H333JH	P.CAPACITOR 50V 0.033U	3	
C2004-06		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2007		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C2008		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2011		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2012-14		ECQB1H332KH	P.CAPACITOR 50V 3300P	3	
C2016		ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2017		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2018-20		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	3	
C2021		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C2022		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C2023		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2801		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2802		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C2803		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2804		ECKF1H181KB	C.CAPACITOR 50V 1800P	1	
C2805		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2806		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C2807		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2808		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C2809		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C2810		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2811		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C2812,13		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	2	
C2814		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C2815		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2816		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C3001		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3004		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C3005		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3006		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3013		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3014		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3015,16		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C3018		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3020		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3022		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3026		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3027		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C3028		ECQB1H153KH	P.CAPACITOR 50V 0.015U	1	
C3029		ECKF1H272KB	C.CAPACITOR 50V 2700P	1	
C3030		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3031		ECKF1H151KB	C.CAPACITOR 50V 150P	1	
C3032		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3033		ECEA1AFS221	E.CAPACITOR 10V 220U	1	
C3601		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3602-05		ECEA1AK470	E.CAPACITOR 10V 47U	4	
C3606		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C3901-03		ECEA1CK220	E.CAPACITOR 16V 22U	3	
C3904		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3905		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3906-09		ECEA1CK100	E.CAPACITOR 16V 10U	4	
C3910,11		VCYD1E332MR	S.CAPACITOR 25V 3300P	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3951		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4001		ECQB1H152JH	P.CAPACITOR 50V 1500P	1	
C4003		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4004		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4005		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C4006		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4007		ECEA1CKL100	E.CAPACITOR 16V 10U	1	
C4008		ECKF1H821KB	C.CAPACITOR 50V 820P	1	
C4009		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C4010		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4011		ECEA1CKL100	E.CAPACITOR 16V 10U	1	
C4012		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4013		ECEA1AK220	E.CAPACITOR 10V 22U	1	
C4014		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C4015,16		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C4019		ECQB1H273KH	P.CAPACITOR 50V 0.027U	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C4023		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4024		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4026		ECEA16247	E.CAPACITOR 16V 47U	1	
C4027		ECCD2H121K	C.CAPACITOR 500V 120P	1	
C4028		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C4029,30		ECEA1CK101	E.CAPACITOR 16V 100U	2	
C4032		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C4201		ECQB1H393JH	P.CAPACITOR 50V 0.039U	1	
C4202		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C4203		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4204		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C4205		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4901,02		VCEA1CAC101E	E.CAPACITOR 16V 100U	2	
C4903,04		ECKF1H101KB	C.CAPACITOR 50V 100P	2	
C4905,06		ECKF1H222KB	C.CAPACITOR 50V 2200P	2	
C4911,12		ECKF1H101KB	C.CAPACITOR 50V 100P	2	
C4917,18		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C4919		VCEA1CAD100J	E.CAPACITOR 16V 10U	1	
C4920		VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4921		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C4922		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4923		VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4924,25		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C4927		VCEA1CAD100J	E.CAPACITOR 16V 10U	1	
C4928		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4929,30		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C4951		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4952		VCEA1AAC101E	E.CAPACITOR 10V 100U	1	
C4953		VCEA1CA330	E.CAPACITOR 16V 33U	1	
C4954		VCEA1AAC330	E.CAPACITOR 10V 33U	1	
C4955		VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4957		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4959		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4960		VCEA1CAC100	E.CAPACITOR 16V 10U	1	
C4961-64		ECEA1CK100	E.CAPACITOR 16V 10U	4	
C4965		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C4966		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C4967		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4968		ECQB1H222KH	P.CAPACITOR 50V 2200P	1	
C4969		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4970		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C6001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6002		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6003		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6006		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6007		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6011,12		ECQB1H103KH	P.CAPACITOR 50V 0.01U	2	
C6013		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6016		ECKF1H221KB	C.CAPACITOR 50V 220P	1	
C6017-19		ECEA0JK470	E.CAPACITOR 6.3V 47U	3	
C6020		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C6021-23		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C6025		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C6030		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C6031		ECEA16210	E.CAPACITOR 16V 10U	1	
C7551		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7552		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7553		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7554		ECQB1H273KH	P.CAPACITOR 50V 0.027U	1	
C7555,56		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C7557		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7558		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C7559		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7560		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C7561		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	NV-FS1EB
C7562		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	NV-FS1EB
C7563		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	NV-FS1EB
C7565		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C7570		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7571		EECS5R5V473	E.CAPACITOR 5.5V 0.047	1	
C7590		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
CR4002		EXED103Z153C	C & R 0.01U 15K	1	
D201		MA153	DIODE	1	
D204		MA153	DIODE	1	
D301		MA4091	DIODE	1	
D803-06		MA165	DIODE	4	
D1102		MA165	DIODE	1	
D1105		MA165	DIODE	1	
D1106		MA4051M	DIODE	1	
D2001-04		MA165	DIODE	4	
D2007-09		MA165	DIODE	3	
D2801-04		MA165	DIODE	4	
D3001-08		MA165	DIODE	8	
D3601,02		MA165	DIODE	2	
D3901		MA165	DIODE	1	
D3951		MA165	DIODE	1	
D4003-07		MA165	DIODE	5	
D4202		MA165	DIODE	1	
D4951		RD6.2JB	ZENER 6.2V	1	
D4952-58		MA165	DIODE	7	
D6001		ERA15-01	DIODE	1	
D6003-05		MA165	DIODE	3	
D6009-12		MA165	DIODE	4	
D6017		ERA15-01	DIODE	1	
D6018		MA4056HTA	DIODE	1	
D6019		MA4140M	DIODE	1	
D6020		MA4110M	DIODE	1	
D6021-24		MA165	DIODE	4	
D6028,29		MA165	DIODE	2	
D6030		MA4056L	DIODE	1	
D6031,32		MA165	DIODE	2	
D6035		11ES1	DIODE	1	
D7550		MA165	DIODE	1	
D7558-60		MA165	DIODE	3	
DL801		VLD0089	DELAY	1	
DL802		EFDHR124A13S	DELAY	1	
FL301		ELB4M022	FILTER	1	
FL302		VLF0499	FILTER	1	
FL303		VLF0567	FILTER	1	
FL801		VLF0299	FILTER	1	
FL3901		ELB4H020	FILTER	1	
FL4001		VLF0332	FILTER	1	
IC201		UPD6162AA601	IC	1	
IC202		MN15312VPL	IC	1	
IC203		LM358P	IC	1	
IC271		UPD4069UBC	IC	1	
IC301		VEFH03D	HIC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC302		AN3494NK	IC	1	<R>
IC303		MSM6965-3RS	IC	1	
IC801		VEFH04A	HIC	1	
IC2001		BA6432S	IC	1	
IC2801		BA6305	IC	1	
IC2802		MN4013B	IC	1	
IC2803		AN6914	IC	1	
IC2804		UPC358C	IC	1	
IC3601		AN6308	IC	1	
IC3901		TA7348P	IC	1	
IC3902		BA7004	IC	1	
IC3951		UPD4001BC	IC	1	
IC4001		BA7752LS	IC	1	
IC4901		M51132L	IC	1	
IC4951		UPD4052BC	IC	1	
IC4952		AN6558	IC	1	
IC4953		UPC4558C	IC	1	
IC4954		M5201L	IC	1	
IC6001		MN15362VBR	IC	1	
IC6002		LM393P	IC	1	
IC6003		MC14510BCP	IC	1	
IC6004		MN1280R	IC	1	
IC7551		AN5043	IC	1	
IC7552		AN6913	IC	1	
IC7553		MN4066B	IC	1	
L271		VLQEL05F101K	COIL 100UH	1	
L301		VLQEL05F101K	COIL 100UH	1	
L302		VLQEL05F220K	COIL 22UH	1	
L303		VLQEL05F101K	COIL 100UH	1	
L304		VLQEL05F121K	COIL 120UH	1	
L305		VLQEL05F680K	COIL 68UH	1	
L306		VLQEL05F101K	COIL 100UH	1	
L309,10		VLQEL05F101K	COIL 100UH	2	
L801		VLQEL05F101K	COIL 100UH	1	
L802-04		VLQEL05F150K	COIL 15UH	3	
L805		VLQEL05F101K	COIL 100UH	1	
L806		VLQEL05F681K	COIL 680UH	1	
L808		VLQEL05F470K	COIL 47UH	1	
L809		VLQEL05F331K	COIL 330UH	1	
L810		VLQEL05F101K	COIL 100UH	1	
L811		VLQEL05F470K	COIL 47UH	1	
L812		VLQEL05F681K	COIL 680UH	1	
L2001		VLQEL05F102K	COIL 1000UH	1	
L2002		VLP0074	COIL	1	
L3002		VLQEL05F101K	COIL 100UH	1	
L3003		VLQ0213K330T	COIL 33UH	1	
L3004		VLQEL05F2R7K	COIL 2.7UH	1	
L3901,02		VLQEL05F101K	COIL 100UH	2	
L3903		VLQEL05F2R2K	COIL 2.2UH	1	
L4001		VLQEL05F101K	COIL 100UH	1	
L4201		VLQEL07F153J	COIL 15MH	1	
P002		VJS1231T	CONNECTOR (FEMALE)	1	
P201		VJS1904	CONNECTOR (FEMALE)	1	
P271		VJR0371	PACK PIN	1	
P302		VJP1233R	CONNECTOR(MALE) 6P	1	
P302		VJS1233R	CONNECTOR (FEMALE)	1	
P501		VJS1235T	CONNECTOR (FEMALE)	1	
P502		VJS1236T	CONNECTOR (FEMALE)	1	
P701		VJS1231T	CONNECTOR (FEMALE)	1	
P703		VJS1239T	CONNECTOR (FEMALE)	1	
P705		VJS1744T	CONNECTOR (FEMALE)	1	
P706		VJS1229	CONNECTOR (FEMALE)	1	
P1101		VJP1230R	CONNECTOR(MALE) 3P	1	
P1101		VJS1230R	CONNECTOR (FEMALE)	1	
P1201		VJS1230	CONNECTOR (FEMALE)	1	
P1202		VJS1229	CONNECTOR (FEMALE)	1	
P1504		VJF0171T	CONNECTOR	1	
P2002		VJP1932T	CONNECTOR (MALE)	1	
P2801		VJP1231T	CONNECTOR(MALE) 4P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P2801		VJS1231T	CONNECTOR (FEMALE)	1	
P2901		VJS1232T	CONNECTOR (FEMALE)	1	
P3003		VJP1237T	CONNECTOR(MALE) 10P	1	
P3003		VJS1237T	CONNECTOR	1	
P3004		VJP1230T	CONNECTOR(MALE) 3P	1	
P3004		VJS1230	CONNECTOR (FEMALE)	1	
P3006		VJP1236T	CONNECTOR(MALE) 9P	1	
P3006		VJS1236T	CONNECTOR (FEMALE)	1	
P3101		VJS1233R	CONNECTOR (FEMALE)	1	
P3401,02		VJS1233R	CONNECTOR (FEMALE)	2	
P3403		VJS1235T	CONNECTOR (FEMALE)	1	
P3404		VJS1231T	CONNECTOR (FEMALE)	1	
P3407		VJS1230R	CONNECTOR (FEMALE)	1	
P3702		VJS1230	CONNECTOR (FEMALE)	1	
P3801		VJS1739T	CONNECTOR (FEMALE)	1	
P3803		VJS1233R	CONNECTOR (FEMALE)	1	
P3805		VJS1230T	CONNECTOR (FEMALE)	1	
P4001		VJP1233T	CONNECTOR(MALE) 6P	1	
P4003		VJS1446	CONNECTOR(FEMALE)	1	
P4004		VJP1141	CONNECTOR(MALE) 2P	1	
P4004		VJS1141	CONNECTOR (FEMALE)	1	
P4502		VJS1231T	CONNECTOR (FEMALE)	1	
P4504		VJS1141	CONNECTOR (FEMALE)	1	
P4951		VJP1231T	CONNECTOR(MALE) 4P	1	
P6002		VJS1935	CONNECTOR (FEMALE)	1	
P6003		VJP1931T	CONNECTOR (MALE)	1	
P6005		VJP1141	CONNECTOR(MALE) 2P	1	
P6006		VJP1233T	CONNECTOR(MALE) 6P	1	
P6006		VJS1739T	CONNECTOR (FEMALE)	1	
P6007		VJP1233T	CONNECTOR(MALE) 6P	1	
P6008		VJP1233R	CONNECTOR(MALE) 6P	1	
P6008		VJS1233R	CONNECTOR (FEMALE)	1	
P7301		VJS1232	CONNECTOR (FEMALE)	1	
P7302		VJS1744T	OONNECTOR (FEMALE)	1	
P7302		VJS1961	CONNECTOR (FEMALE)	1	
P7403		VJP1234T	CONNECTOR(MALE) 7P	1	
P7404		VJS1475	CONNECTOR(FEMALE)	1	
P7503		VJS1239T	CONNECTOR (FEMALE)	1	
P7504		VJS1234R	CONNECTOR (FEMALE)	1	
P7801		VJS1234T	CONNECTOR (FEMALE)	1	
PK201		VJR0189	PACK PIN	1	
PK202,03		VJR0190	PACK PIN	2	
PK3601		VJR0477	PACK PIN	1	
PK4201		VJR0160	PACK PIN	1	
Q201,02		2SD601	TRANSISTOR CHIP	2	(Q,R,S)
Q203-06		2SB709	TRANSISTOR CHIP	4	(Q,R,S)
Q208		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q301		2SB709	TRANSISTOR CHIP	1	
Q302,03		2SC2295	TRANSISTOR	2	
Q304		2SD601	TRANSISTOR CHIP	1	
Q801		2SD601	TRANSISTOR	1	
Q802		2SC2295	TRANSISTOR	1	
Q804		2SB709	TRANSISTOR CHIP	1	
Q2001		2SB641	TRANSISTOR	1	(Q,R,S)
Q2002		2SD636	TRANSISTOR	1	(Q,R,S)
Q2801		2SD636	TRANSISTOR	1	(Q,R,S)
Q2802		2SB641	TRANSISTOR	1	(Q,R,S)
Q2803-08		2SD636	TRANSISTOR	6	(Q,R,S)
Q3003		2SD655EF	TRANSISTOR	1	
Q3005		2SD636	TRANSISTOR	1	(Q,R,S)
Q3006		2SC2206	TRANSISTOR	1	
Q3050		2SD636	TRANSISTOR	1	
Q3901		2SC2206	TRANSISTOR	1	
Q3951		2SB641	TRANSISTOR	1	(Q,R,S)
Q4001		2SC1318	TRANSISTOR	1	
Q4002,03		2SD637	TRANSISTOR	2	
Q4004		2SB642	TRANSISTOR	1	
Q4006		2SD636	TRANSISTOR	1	
Q4007		2SB643	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q4201		2SD655	TRANSISTOR	1	
Q4202		2SD655	TRANSISTOR	1	(E,F)
Q4901		2SD1330	TRANSISTOR	1	
Q4951		2SD636	TRANSISTOR	1	(Q,R,S)
Q6006		2SB641	TRANSISTOR	1	
Q6007		2SB790	TRANSISTOR	1	(Q,R,S)
Q6008		2SB641	TRANSISTOR	1	
Q6009		2SA1128	TRANSISTOR	1	
Q6011		2SA1128	TRANSISTOR	1	
Q6015		2SD655EF	TRANSISTOR	1	
Q6016		2SD1783	TRANSISTOR	1	
Q6017		2SD893	TRANSISTOR	1	
Q6018		2SD973	TRANSISTOR	1	(Q,R,S)
Q6019		2SD638	TRANSISTOR	1	(Q,R,S)
Q7553		2SD636	TRANSISTOR	1	
QR201,02		DTA144EK	TRANSISTOR-RESISTOR	2	
QR203		UN2212	TRANSISTOR-RESISTOR	1	
QR301-06		UN2212	TRANSISTOR-RESISTOR	6	
QR801		UN2212	TRANSISTOR-RESISTOR	1	
QR1101		UN1213	TRANSISTOR-RESISTOR	1	
QR2002		UN1212	TRANSISTOR-RESISTOR	1	
QR2003,04		UN1112	TRANSISTOR-RESISTOR	2	
QR2006,07		UN1213	TRANSISTOR-RESISTOR	2	
QR2801-03		DTC144EA	TRANSISTOR RESISTOR	3	OR UN1213
QR2804		DTC114EA	TRANSISTOR RESISTOR	1	
QR3001		UN1111	TRANSISTOR-RESISTOR	1	
QR3002		UN1212	TRANSISTOR-RESISTOR	1	
QR3003		UN1113	TRANSISTOR-RESISTOR	1	
QR3004		UN1214	TRANSISTOR-RESISTOR	1	
QR3006		UN1213	TRANSISTOR-RESISTOR	1	
QR3008		2SD1676	TRANSISTOR-RESISTOR	1	
QR3601-05		UN1212	TRANSISTOR-RESISTOR	5	
QR4002		UN1113	TRANSISTOR-RESISTOR	1	
QR4003		UN1216	TRANSISTOR-RESISTOR	1	
QR4004		UN1213	TRANSISTOR-RESISTOR	1	
QR4202-04		2SD1676	TRANSISTOR-RESISTOR	3	
QR6001		UN1212	TRANSISTOR-RESISTOR	1	
QR6004,05		UN1213	TRANSISTOR-RESISTOR	2	
QR6006		UN1111	TRANSISTOR-RESISTOR	1	
QR6008		UN1111	TRANSISTOR-RESISTOR	1	
QR6010		UN1111	TRANSISTOR-RESISTOR	1	
QR6011		UN1212	TRANSISTOR-RESISTOR	1	
QR6012		UN1113	TRANSISTOR-RESISTOR	1	
QR6013,14		UN1213	TRANSISTOR-RESISTOR	2	
QR6015		UN1212	TRANSISTOR-RESISTOR	1	
QR6016		UN1111	TRANSISTOR-RESISTOR	1	
QR6199		UN1210	TRANSISTOR-RESISTOR	1	
QR7556-59		UN1213	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R201		ERJ6GEYJ393	CHIP 1/10W 39K	1	
R202		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R203		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R204		ERJ6GEYJ221	CHIP 1/10W 220	1	
R205		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R206		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R207		ERJ6GEYJ473	CHIP 1/10W 47K	1	
R208		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R209		ERJ6GEYJ682	CHIP 1/10W 6.8K	1	
R210		ERJ6GEYJ274	CHIP 1/10W 270K	1	
R211		ERJ6GEYJ563	CHIP 1/10W 56K	1	
R212,13		ERJ6GEYJ154	CHIP 1/10W 150K	2	
R214		ERJ6GEYJ224	CHIP 1/10W 220K	1	
R215		ERJ6GEYJ272	CHIP 1/10W 2.7K	1	
R216		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R217		ERJ6GEYJ683	CHIP 1/10W 68K	1	
R218,19		ERJ6GEYJ333	CHIP 1/10W 33K	2	
R220		ERJ6GEYJ274	CHIP 1/10W 270K	1	
R222,23		ERJ6GEYJ332	CHIP 1/10W 3.3K	2	
R224		ERJ6GEYJ561	CHIP 1/10W 560	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R225		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R226		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R227		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R228		ERJ6GEYJ393	CHIP 1/10W 39K	1	
R229		ERJ6GEYJ221	CHIP 1/10W 220	1	
R230,31		ERJ6GEYJ152	CHIP 1/10W 1.5K	2	
R232,33		ERJ6GEYJ563	CHIP 1/10W 56K	2	
R234		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R235		ERJ6GEYJ333	CHIP 1/10W 33K	1	
R236,37		ERJ6GEYJ154	CHIP 1/10W 150K	2	
R238		ERJ6GEYJ124	CHIP 1/10W 120K	1	
R239		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R240		ERJ6GEYG333	CHIP 1/10W 33K	1	
R241		ERJ6GEYJ684	CHIP 1/10W 680K	1	
R242		ERJ6GEYJ184	CHIP 1/10W 180K	1	
R243		ERJ6GEYJ683	CHIP 1/10W 68K	1	
R244,45		ERJ6GEYJ223	CHIP 1/10W 22K	2	
R246		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R247		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R248		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R249		ERJ6GEYG472	CHIP 1/10W 4.7K	1	
R250		ERJ6GEYJ821	CHIP 1/10W 820	1	
R251		ERJ6GEYJ824	CHIP 1/10W 820K	1	
R252		ERJ6GEYJ473	CHIP 1/10W 47K	1	
R253		ERJ6GEYJ684	CHIP 1/10W 680K	1	
R256		ERJ6GEYJ123	CHIP 1/10W 12K	1	
R257		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R258		ERJ6GEYJ683	CHIP 1/10W 68K	1	
R259,60		ERJ6GEYJ223	CHIP 1/10W 22K	2	
R266,67		ERJ6GEYJ563	CHIP 1/10W 56K	2	
R268,69		ERJ6GEYJ562	CHIP 1/10W 5.6K	2	
R274		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R281		ERJ6GEYJ105	CHIP 1/10W 1M	1	
R282		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R284		ERJ6GEYJ105	CHIP 1/10W 1M	1	
R285		ERJ6GEYJ682	CHIP 1/10W 6.8K	1	
R286		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R301		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R302		ERJ6GEYJ391	CHIP 1/10W 390	1	
R303		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R304		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R305		ERJ6GEYJ824	CHIP 1/10W 820K	1	
R306		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R307		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R308		ERJ6GEYJ123	CHIP 1/10W 12K	1	
R309		ERJ6GEYJ272	CHIP 1/10W 2.7K	1	
R310		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R311		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R312		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R313,14		ERJ6GEYJ103	CHIP 1/10W 10K	2	
R316		ERJ6GEYJ104	CHIP 1/10W 100K	1	
R318		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R319		ERJ6GEYJ823	CHIP 1/10W 82K	1	
R320,21		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R322		ERJ6GEYJ391	CHIP 1/10W 390	1	
R323		ERJ6GEYJ471	CHIP 1/10W 470	1	
R324		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R325		ERJ6GEYJ151	CHIP 1/10W 150	1	
R326		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R327		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R328		ERJ6GEYJ272	CHIP 1/10W 2.7K	1	
R329		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R330		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R331		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R332		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R334,35		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R338		ERJ6GEYJ124	CHIP 1/10W 120K	1	
R339		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R340		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R341		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R342		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R801		ERJ6GEYJ271	CHIP 1/10W 270	1	
R802		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R803,04		ERJ6GEYJ103	CHIP 1/10W 10K	2	
R805,06		ERJ6GEYJ471	CHIP 1/10W 470	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R807		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R808		ERJ6GEYJ681	CHIP 1/10W 680	1	
R809		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R810		ERJ6GEYJ331	CHIP 1/10W 330	1	
R814		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R815		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R816		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R817,18		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R819		ERJ6GEYJ182	CHIP 1/10W 1.8K	1	
R820		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R821		ERJ6GEYJ273	CHIP 1/10W 27K	1	
R822		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R823		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R823		ERJ6GEYJ271	CHIP 1/10W 270	1	
R824		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R825		ERJ6GEYJ182	CHIP 1/10W 1.8K	1	
R826		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R827		ERJ6GEYJ563	CHIP 1/10W 56K	1	
R828		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R829		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R830		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R1105		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2001-03		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2004		ERX12SJ1R0	M.RESISTOR 1/2W 1	1	
R2005		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2006		EROS2CKG5101	M.RESISTOR 1/4W 5.1K	1	
R2007		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R2008		EROS2CKG6801	M.RESISTOR 1/4W 6.8K	1	
R2009		EROS2CKG4701	M.RESISTOR 1/4W 4.7K	1	
R2010		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R2011		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2012		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2013,14		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R2018		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2029		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R2030		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R2031		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R2032		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R2033		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R2034		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2036		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2039		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R2040		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R2800		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R2801,02		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R2803		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2804		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R2805		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R2806		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R2807		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
R2808		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2809		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R2810		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R2811		EROS2CKG1102	M.RESISTOR 1/4W 11K	1	
R2812		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R2813		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R2814		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2815,16		ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R2817		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R2818		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2819		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R2820		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R2821		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2822		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R2823		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R2824		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R2825		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2826		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R2827		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R2828		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R2829		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R2830		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R2831		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R2832		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R2833		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R2834		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R2835		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R2836,37		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R2838		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R2839,40		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3002		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3004		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3005		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3011		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3012		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3013		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3014		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3017		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3018		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3019		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3020		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3021		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3022		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3023		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3024		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R3025		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3026		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3027		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3050		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R3601		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3602-05		ERDS2TJ153	C.RESISTOR 1/4W 15K	4	
R3901,02		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
R3903,04		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	2	
R3905		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3906,07		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
R3909,10		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
R3911		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3912		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3913		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3914		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3915		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3951		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3952,53		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	2	
R3954,55		ERDS2TJ684	C.RESISTOR 1/4W 680K	2	
R4001		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R4002		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R4004		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R4005		EROS2CKG1301	M.RESISTOR 1/4W 1.3K	1	
R4006		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4009		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
R4010		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R4011		ERDS2TJ334	C.RESISTOR 1/4W 330K	1	
R4012		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R4013		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4014		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4015		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R4016		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R4017		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4018		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R4019		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4020		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R4022		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4023		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4024		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R4026		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R4027		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R4030		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4031		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4032		ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R4033		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4036		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4037		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R4040		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4041		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R4201		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R4202		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R4203		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4204		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R4205		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4206		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4207		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4901		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4902,03		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R4904,05		ERDS2TJ101	C.RESISTOR 1/4W 100	2	
R4906,07		ERDS2TJ471	C.RESISTOR 1/4W 470	2	
R4910,11		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R4912,13		ERDS2TJ221	C.RESISTOR 1/4W 220	2	
R4914,15		ERDS2TJ471	C.RESISTOR 1/4W 470	2	
R4918		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R4919,20		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	2	
R4922,23		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	2	
R4951,52		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	2	
R4953		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R4954-57		ERDS2TJ473	C.RESISTOR 1/4W 47K	4	
R4958,59		EROS2CKG2702	M.RESISTOR 1/4W 27K	2	
R4960		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R4961-65		ERDS2TJ153	C.RESISTOR 1/4W 15K	5	
R4966,67		ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R4968		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R4969,70		ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R4971,72		ERDS2TJ684	C.RESISTOR 1/4W 680K	2	
R4973		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R4974		EROS2CKG3902	M.RESISTOR 1/4W 39K	1	
R4975		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4976		EROS2CKG3902	M.RESISTOR 1/4W 39K	1	
R4977		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4978		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4979,80		ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R4981		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4982		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4983		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4984		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4985,86		ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R4987		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4988		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4989		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4990-93		ERDS2TJ473	C.RESISTOR 1/4W 47K	4	
R4994		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R4995		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4996		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R6001		ERDS1TJ470	C.RESISTOR 1/2W 47	1	
R6002		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R6005		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6006		ERD2FCG220	C.RESISTOR 2W 22	1	
R6007		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R6008		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R6009		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R6010		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6011		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R6016,17		ERDS2TJ223	C.RESISTOR 1/4W 22K	2	
R6019		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6022		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6023		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R6024		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6025		ERDS2TJ824	C.RESISTOR 1/4W 820K	1	
R6026		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R6027		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6028		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R6029		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R6030,31		ERDS2TJ153	C.RESISTOR 1/4W 15K	2	
R6032		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6033,34		ERDS2TJ333	C.RESISTOR 1/4W 33K	2	
R6035-37		ERDS2TJ101	C.RESISTOR 1/4W 100	3	
R6038		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6041		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R6042		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6045		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6046		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R6047		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6048,49		ERDS2TJ333	C.RESISTOR 1/4W 33K	2	
R6050		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6051		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6054		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6055		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R6067		ERDS2TJ101	C.RESISTOR 1/4W 100	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6068		ERDS1TJ332	C.RESISTOR 1/2W 3.3K	1	
R6069		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6070		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6071		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R6072		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6073		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6074		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R6075		ERG2SJ180	M.RESISTOR 2W 18	1	
R6076		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R6077		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6079		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6080		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6081		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6082		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R6083		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R6084,85		ERDS2TJ561	C.RESISTOR 1/4W 560	2	
R6086		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6088		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6090		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R6091		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6093		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6096		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6097		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R6098		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R6100		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7550		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R7551,52		ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R7553		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R7554		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R7555		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7556		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7557		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7558		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7559		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7563		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7577-80		ERDS2TJ103	C.RESISTOR 1/4W 10K	4	
R7581		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R7582		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R7583		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7584		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R7585		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7586		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R7589-92		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	4	
R7595		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
S3901		VSS0162	SWITCH	1	
T4001		EIQ7QF013Q	TRANSFORMER	1	
VR301		EVND3AA00B24	V.RESISTOR 20K	1	
VR302		EVN3ACA00B14	V.RESISTOR 10K	1	
VR801		EVN3ACA00B52	V.RESISTOR 500	1	
VR802		EVN3ACA00B13	V.RESISTOR 1K	1	
VR2001		EVND3AA00B54	V.RESISTOR 50K	1	
VR2002		EVND3AA00B15	V.RESISTOR 100K	1	
VR2006		EVND3AA00B15	V.RESISTOR 100K	1	
VR2009,10		EVL51MA00B25	V.RESISTOR 200K	2	
VR2011		EVND3AA00B15	V.RESISTOR 100K	1	
VR2013		EVND3AA00B23	V.RESISTOR 2K	1	
VR4001		EVND3AA00B14	V.RESISTOR 10K	1	
VR4002		EVND3AA00B25	V.RESISTOR 200K	1	
VR4004,05		EVND3AA00B53	V.RESISTOR 5K	2	
VR4510		EVN38CA00B15	V.RESISTOR 100K	1	
X271		VSX0066	CRYSTAL OSCILLATOR	1	
X272		VSX0225	CRYSTAL OSCILLATOR	1	
X301		VSX0225	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
X801		VSX0162	CRYSTAL OSCILLATOR	1	
X3901		VSX0099	CRYSTAL OSCILLATOR	1	
X6001		EFOFC3584A5	CRYSTAL OSCILLATOR	1	
X7504		EFBAA40D101	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0045	WIRE SADLE	1	
		VJF0215	BINDER	1	
		VMZ1130	HEAT SINK	1	
		VWJ0265	5P FLEXIBLE CABLE	1	P1503-P6002
		VMP0848	EARTH ANGLE	1	
		VSC1068	HEAT SINK	1	
		VSC1689	HEAT SINK	1	
		VMC0075	HEAT SINK FIXING SPRING	1	
	■	VEP04225A	HI-FI AUDIO PACK C.B.A.		(NLA)
			CAPACITORS		
C4501		VCEA1AAE470J	E.CAPACITOR 10V 47U	1	
C4502		ECQB1H821JH	P.CAPACITOR 50V 820P	1	
C4505		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4506		VCEA1AAE470J	E.CAPACITOR 10V 47U	1	
C4507		VCEA1EAE4R7J	E.CAPACITOR 25V 4.7U	1	
C4508		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4509		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4510		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C4511		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4512		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4513		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4514		ECEA2524R7	E.CAPACITOR 25V 4.7U	1	
C4515		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4516		ECEA16Z10	E.CAPACITOR 16V 10U	1	
C4517		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C4518		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C4519		VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4520		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4521		VCEA1EAE4R7J	E.CAPACITOR 25V 4.7U	1	
C4522		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4523		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4524		VCEA1AAE470J	E.CAPACITOR 10V 47U	1	
C4525		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C4526		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4527		ECQB1H821JH	P.CAPACITOR 50V 820P	1	
C4530		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4531		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4532		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4533		VCEA1EAE4R7J	E.CAPACITOR 25V 4.7U	1	
C4534		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4535		ECCF1H100DC	C.CAPACITOR 50V 10P	1	
C4536		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4537		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C4538		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C4539		VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4540		VCEA1CAE470J	E.CAPACITOR 16V 47U	1	
C4541		VCEA1HAE010J	E.CAPACITOR 50V 1U	1	
C4542		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4543,44		VCEA1CAE100J	E.CAPACITOR 16V 10U	2	
C4545		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
C4546		ECQB1H102KH	P.CAPACITOR 50V 1000P	1	
C4547		VCEA1EAD3R3J	E.CAPACITOR 25V 3.3U	1	
C4548		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C4549		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C4550-52		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C4553		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C4554		VCEA1AAE330J	E.CAPACITOR 10V 33U	1	
C4555		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4556		ECQB1H102KH	P.CAPACITOR 50V 1000P	1	
C4557		VCEA1EAD3R3J	E.CAPACITOR 25V 3.3U	1	
C4558		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
C4559		VCEA1CAE100J	E.CAPACITOR 16V 10U	1	
C4560		ECCF1H330KC	C.CAPACITOR 50V 33P	1	
C4561		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C4562,63		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C4564		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C4565		ECCF1H100DC	C.CAPACITOR 50V 10P	1	
C4566		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4567		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C4572		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4573		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4574		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4576		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4577		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C4578		ECCF1H221JC	C.CAPACITOR 50V 220P	1	
C4579		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C4580		ECQB1H102KH	P.CAPACITOR 50V 1000P	1	
C4581		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4582		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C4583		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4584		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C4585		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4586		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4587		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4589		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4590		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4591		VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4592		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4593		VCEA1EAC4R7	E.CAPACITOR 25V 4.7U	1	
C4594,95		ECEA1CK330	E.CAPACITOR 16V 33U	2	
C4596,97		VCEA1VAC3R3	E.CAPACITOR 35V 3.3U	2	
C4598		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C4599		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4600		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4601		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4602,03		ECEA1AK101	E.CAPACITOR 10V 100U	2	
C4604		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4605		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C4606		VCEA1AAC330	E.CAPACITOR 10V 33U	1	
C4607		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4608		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4651		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4652,53		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	2	
C4654		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4655		ECEA16Z10	E.CAPACITOR 16V 10U	1	
C4656		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4657,58		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	2	
C4659		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4660,61		ECKF1H391KB	C.CAPACITOR 50V 390P	2	
C4662		ECEA16Z33	E.CAPACITOR 16V 33U	1	
C4663		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4701		ECEA1HKR33	E.CAPACITOR 50V 0.33U	1	
C4702		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4703		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4704		ECEA1HKR33	E.CAPACITOR 50V 0.33U	1	
C4705		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4706		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4707		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C4751		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
D4501		MA165	DIODE	1	
D4502		MA154WK	DIODE	1	
D4503		MA165	DIODE	1	
D4504,05		MA154WA	DIODE	2	
D4506		MA165	DIODE	1	
D4508,09		MA165	DIODE	2	
D4511		MA156	DIODE	1	
D4512,13		MA165	DIODE	2	
D4651		MA165	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FL4501		VLF0520	FILTER	1	
FL4503		VLF0520	FILTER	1	
FL4506		VLF0442	FILTER	1	
FL4651		VLF0443	FILTER	1	
FL4652		VLF0445	FILTER	1	
FL4653		VLF0441	FILTER	1	
IC4501		BA7721S	IC	1	
IC4502		BA7711S	IC	1	
IC4503		AN3920K	IC	1	
IC4504		BA7056LS	IC	1	
IC4651,52		TA7302P	IC	2	
L4501		VLQEL05F101K	COIL 100UH	1	
L4504		VLQEL05F221K	COIL 220UH	1	
L4505,06		VLQEL05F101K	COIL 100UH	2	
L4651		VLQEL05F101K	COIL 100UH	1	
P4502,03		VJP1231T	CONNECTOR(MALE) 4P	2	
P4504		VJP1141	CONNECTOR(MALE) 2P	1	
PK4701		VJR0160	PACK PIN	1	
PK4751		VJR0231	PACK PIN	1	
Q4501		2SD638	TRANSISTOR	1	(Q,R,S)
Q4502		2SB641	TRANSISTOR	1	(Q,R,S)
Q4503		2SD636	TRANSISTOR	1	(Q,R,S)
Q4504,05		2SD1330	TRANSISTOR	2	(S,T)
Q4651,52		2SD636	TRANSISTOR	2	(Q,R,S)
Q4701,02		2SD636	TRANSISTOR	2	
QR4501		UN1213	TRANSISTOR-RESISTOR	1	
QR4503		UN1213	TRANSISTOR-RESISTOR	1	
QR4507		UN1212	TRANSISTOR-RESISTOR	1	
QR4508		UN1211	TRANSISTOR-RESISTOR	1	
QR4509		UN1213	TRANSISTOR-RESISTOR	1	
QR4510		UN1112	TRANSISTOR-RESISTOR	1	
QR4511		UN1212	TRANSISTOR-RESISTOR	1	
QR4651		UN1112	TRANSISTOR-RESISTOR	1	
QR4652		UN1212	TRANSISTOR-RESISTOR	1	
QR4751		2SD1676	COMBINATION PARTS	1	
			RESISTORS		
R4501,02		EROS2CKG1801	M.RESISTOR 1/4W 1.8K	2	
R4503		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4504		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	1	
R4505		ERDS2TJ225	C.RESISTOR 1/4W 2.2M	1	
R4506		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4507		EROS2CKG2001	M.RESISTOR 1/4W 2K	1	
R4508		EROS2CKG3601	M.RESISTOR 1/4W 3.6K	1	
R4509		EROS2CKG1002	M.RESISTOR 1/4W 10K	1	
R4510		EROS2CKG1101	M.RESISTOR 1/4W 1.1K	1	
R4511		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R4512		EROS2CKG3901	M.RESISTOR 1/4W 3.9K	1	
R4513		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R4514		EROS2CKG1201	M.RESISTOR 1/4W 1.2K	1	
R4515		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4516		EROS2CKG3302	M.RESISTOR 1/4W 33K	1	
R4517		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R4518		ERDS2TJ101	C.RESISTOR 1/4W 100	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4519		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	1	
R4520		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4521		ERDS2TJ225	C.RESISTOR 1/4W 2.2M	1	
R4522,23		EROS2CKG1801	M.RESISTOR 1/4W 1.8K	2	
R4524		EROS2CKG2001	M.RESISTOR 1/4W 2K	1	
R4525		EROS2CKG3601	M.RESISTOR 1/4W 3.6K	1	
R4526		EROS2CKG1002	M.RESISTOR 1/4W 10K	1	
R4527		EROS2CKG1101	M.RESISTOR 1/4W 1.1K	1	
R4528		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R4529		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R4530		EROS2CKG3901	M.RESISTOR 1/4W 3.9K	1	
R4531		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4532		EROS2CKG1201	M.RESISTOR 1/4W 1.2K	1	
R4533		EROS2CKG3302	M.RESISTOR 1/4W 33K	1	
R4534		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4535		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4536		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R4537		EROS2CKG2402	M.RESISTOR 1/4W 24K	1	
R4538		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4539		EROS2CKG5601	M.RESISTOR 1/4W 5.6K	1	
R4540		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R4541		EROS2CKG2402	M.RESISTOR 1/4W 24K	1	
R4542		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4543		EROS2CKG7501	M.RESISTOR 1/4W 7.5K	1	
R4544		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R4545		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R4555		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4556		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4558		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4559		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4562		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R4563		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R4564		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4565		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4566		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4569,70		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	2	
R4572		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4573		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4574		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4575		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4576		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R4577		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4578		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4579		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R4580		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4581,82		ERDS2TJ680	C.RESISTOR 1/4W 68	2	
R4583		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4584		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
R4585		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4586		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4587		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4588		ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R4589,90		EROS2CKG4701	M.RESISTOR 1/4W 4.7K	2	
R4591		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R4592		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R4593		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4594,95		EROS2CKG8200	M.RESISTOR 1/4W 820	2	
R4596,97		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	2	
R4598		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4599		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4600		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R4602		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R4651,52		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R4653		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4654		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4655		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4656		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R4657		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R4658		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4659		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R4660		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4664		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4665		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4667		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4668		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4669		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R4670,71		ERSB20J102	M.RESISTOR 2W 1K	2	
R4701		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R4702		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4703,04		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	2	
R4705		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R4706		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R4707		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R4708,09		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	2	
R4710		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R4711,12		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	2	
R4713		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R4714		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4752		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
VR4501		EVN38CA00B23	V.RESISTOR 2K	1	
VR4502		VRV0021	V.RESISTOR	1	
VR4503		VRV0020	V.RESISTOR 2K	1	
VR4504		VRV0021	V.RESISTOR	1	
VR4505		VRV0024	V.RESISTOR 50K	1	
VR4507,08		VRV0021	V.RESISTOR	2	
VR4509		EVN38CA00B23	V.RESISTOR 2K	1	
	■	VEP00J12B	HEAD PHONE JACK C.B.A.		(NLA)
BP6301		VJP1808	CONNECTOR (MALE)	1	
			CAPACITORS		
C6301		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C6302		ECEA1EKS3R3	E.CAPACITOR 25V 3.3U	1	
C6303		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
IC6301		VCR0172	IC	1	
J6301		VJJ0096	HEAD PHONE JACK	1	
J6302		VJJ0138	MIC JACK	1	
	■	VEP00K04A	S-VHS TERMINAL C.B.A.		(NLA)
P3409		VJS1235R	CONNECTOR (FEMALE)	1	
P3951		VJP1248T	CONNECTOR(MALE) 8P	1	
P3951		VJS1235T	CONNECTOR (FEMALE)	1	
			RESISTORS		
R3951,52		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
	■	VEP00N25A	HEATER C.B.A.		(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1201		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
P1201		VJP1244T	CONNECTOR(MALE) 4P	1	
P1202		VJP1242T	CONNECTOR(MALE) 2P	1	
P1203		VJP1242R	CONNECTOR(MALE) 2P	1	
Q1201		2SD1273	TRANSISTOR	1	
QR1201		UN1212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R1201,02		ERDS2TJ223	C.RESISTOR 1/4W 22K	2	
	■	VEP03505A	S-VHS C.B.A.		(NLA)
BP3408		VJP1254	CONNECTOR (MALE)	1	
BP3410		VJP1256	CONNECTOR (MALE)	1	
BP3411		VJP1257	CONNECTOR (MALE)	1	
BP3412		VJP1258	CONNECTOR (MALE)	1	
			CAPACITORS		
C3101		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C3102		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3103,04		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3105		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3107		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C3108		ECKF1H181KB	C.CAPACITOR 50V 1800P	1	
C3109		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3110		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C3111		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3112-15		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	4	
C3116		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3117		ECKF1H181KB	C.CAPACITOR 50V 1800P	1	
C3122		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C3124		ECKF1H681KB	C.CAPACITOR 50V 680P	1	
C3125		ECCF1H150KC	C.CAPACITOR 50V 15P	1	
C3126		ECCF1H220KC	C.CAPACITOR 50V 22P	1	
C3128		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3130		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
C3134		VCKD1H151JA	C.CAPACITOR 50V 150P	1	
C3135		VCKD1H181JA	C.CAPACITOR 50V 180P	1	
C3136		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
C3137		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3138		ECCF1H180JC	C.CAPACITOR 50V 18P	1	
C3139		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3143		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3145		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C3201		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
C3202		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3203		ECCF1H100DC	C.CAPACITOR 50V 10P	1	
C3204		ECCF1H390JC	C.CAPACITOR 50V 39P	1	
C3205,06		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3207		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C3208		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
C3209		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C3210		ECCF1H220KC	C.CAPACITOR 50V 22P	1	
C3211		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3212		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3213-15		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3301		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C3302		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C3303		ECQP1H272JZ	P.CAPACITOR 50V 2700P	1	
C3304		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3305		ECCF1H150KC	C.CAPACITOR 50V 15P	1	
C3306		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C3307		ECCF1H150KC	C.CAPACITOR 50V 15P	1	
C3311		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C3312		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3313		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3314		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3315		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3316,17		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C3318,19		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3320		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3321		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3322,23		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3324,25		ECCF1H470KC	C.CAPACITOR 50V 47P	2	
C3326		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3327		ECCF1H150KC	C.CAPACITOR 50V 15P	1	
C3328		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3330		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3401		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3402		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3403		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3404		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C3405		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C3406		ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C3407		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3408		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C3409		ECCF1H180JC	C.CAPACITOR 50V 18P	1	
C3410		ECCF1H470KC	C.CAPACITOR 50V 47P	1	
C3411		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C3412		ECCF1H121KC	C.CAPACITOR 50V 120P	1	
C3413		ECCF1H680KC	C.CAPACITOR 50V 68P	1	
C3414		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3415,16		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	2	
C3417		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3418		ECCF1H221J	C.CAPACITOR 50V 220P	1	
C3419,20		ECCF1H271J	C.CAPACITOR 50V 270P	2	
C3421		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3422		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3423		ECCF1H271J	C.CAPACITOR 50V 270P	1	
C3424		ECCF1H221J	C.CAPACITOR 50V 220P	1	
C3425		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C3426,27		ECCF1H271J	C.CAPACITOR 50V 270P	2	
C3428		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3429		ECCF1H101KC	C.CAPACITOR 50V 100P	1	
C3430		ECCF1H680KC	C.CAPACITOR 50V 68P	1	
C3431		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3432		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3433		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3434		ECEA1EKN3R3	ELECTROLYTIC 25V 3.3U	1	
C3435		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C3436,37		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3438,39		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C3442		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3443,44		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C3445		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3446		ECEA1AU471	E.CAPACITOR 10V 470U	1	
C3447		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3448		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C3449		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3450		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3451		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3452		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3453		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3454		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3455		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3456,57		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3458		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3459-61		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C3462		ECCF1H080CC	C.CAPACITOR 50V 8P	1	
C3463		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3464		ECCF1H470KC	C.CAPACITOR 50V 47P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3465-67		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C3468		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3469		ECKF1H681KB	C.CAPACITOR 50V 680P	1	
C3470		ECCF1H121J	C.CAPACITOR 50V 120P	1	
C3471		ECEA0JU220	E.CAPACITOR 6.3V 22U	1	
C3472,73		ECKF1H102KB	C.CAPACITOR 50V 1000P	2	
C3474,75		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
C3476		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C3477		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3478		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3479		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3480		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C3481		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C3482		ECCF1H060DC	C.CAPACITOR 50V 6P	1	
C3483		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C3484		ECCF1H680JC	C.CAPACITOR 50V 68P	1	
C3485		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C3486		ECCF1H390JC	C.CAPACITOR 50V 39P	1	
C8201		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8202		ECCF1H390JC	C.CAPACITOR 50V 39P	1	
C8203		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C8204		ECKF1H391KB	C.CAPACITOR 50V 390P	1	
C8205-07		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	3	
C8208		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C8209		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8210		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C8211		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C8212		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C8213		ECQV1H394JZ	P.CAPACITOR 50V 0.39U	1	
C8214		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C8215-19		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	5	
C8220		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8221		ECCF1H270JC	C.CAPACITOR 50V 27P	1	
D3101-03		MA165	DIODE	3	
D3201-04		MA165	DIODE	4	
D3301,02		MA165	DIODE	2	
D3304		MA165	DIODE	1	
D3401		MA4033	DIODE	1	
D3403		MA4039M	DIODE	1	
D3404,05		MA165	DIODE	2	
D3406		1SS99	DIODE	1	
D3407		MA165	DIODE	1	
D8201-08		MA165	DIODE	8	
DL8201		VLD0163	DELAY	1	
DL8202		EFDRT325A12A	DELAY	1	
FL3101		ELB5A066	FILTER	1	
FL3102		ELB4M063	FILTER	1	
FL3201		ELB4R031	FILTER	1	
FL3401		VLF0639	FILTER	1	
FL3402		ELB4M065	FILTER	1	
FL3403		VLF0523	FILTER	1	
IC3101		VCR0185A	IC	1	
IC3301		UPC1517CA	IC	1	
IC3302		TL8705P	IC	1	
IC3303		AN78L09	IC	1	
IC3401		M51647SP	IC	1	
IC3402		AN6306	IC	1	
IC3403		VC2031DP	IC	1	
IC3404		AN3321K	IC	1	
IC3405,06		AN6308	IC	2	
IC8201		AN3594K	IC	1	
IC8202		LM393P	IC	1	
IC8203		AN6308	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L3101		VLQEL05F101K	COIL 100UH	1	
L3102		VLQEL05F151K	COIL 150UH	1	
L3103		VLQEL05F820K	COIL 82UH	1	
L3104		VLQEL05F101K	COIL 100UH	1	
L3105		VLQEL05F391K	COIL 390UH	1	
L3108		VLQEL05F101K	COIL 100UH	1	
L3109		VLQEL05F270K	COIL 27UH	1	
L3111		VLQEL05F101K	COIL 100UH	1	
L3112		VLQEL05F120K	COIL 12UH	1	
L3116		VLQEL05F5R6J	COIL 5.6UH	1	
L3117		VLQEL05R4R7J	COIL 4.7UH	1	
L3118		VLQEL05F101K	COIL 100UH	1	
L3201		VLQEL05F390K	COIL 39UH	1	
L3202		VLQEL05F180K	COIL 18UH	1	
L3203		VLQEL05F100J	COIL 10UH	1	
L3204		VLQEL05F101K	COIL 100UH	1	
L3301		VLQEL05F101K	COIL 100UH	1	
L3302,03		VLQEL05F390K	COIL 39UH	2	
L3306		VLQEL05F101K	COIL 100UH	1	
L3307		VLQEL05F100J	COIL 10UH	1	
L3308		VLQEL05F101K	COIL 100UH	1	
L3401,02		VLQEL05F101K	COIL 100UH	2	
L3403		VLQEL05F1R0K	COIL 1UH	1	
L3404		VLQEL05F101K	COIL 100UH	1	
L3405		VLQEL05F681K	COIL 680UH	1	
L3406-09		VLQEL05F101K	COIL 100UH	4	
L3410		VLQEL05F470K	COIL 47UH	1	
L3411		VLQEL05F180K	COIL 18UH	1	
L3412		VLQEL05F101K	COIL 100UH	1	
L3414		VLQEL05F390K	COIL 39UH	1	
L8201		VLQEL05F101K	COIL 100UH	1	
L8202,03		VLQEL05F150K	COIL 15UH	2	
L8205		VLQEL05F8R2K	COIL 8.2UH	1	
L8206		VLQEL05F270K	COIL 27UH	1	
P3101		VJP1233R	CONNECTOR(MALE) 6P	1	
P3301		VJP1233T	CONNECTOR(MALE) 6P	1	
P3401,02		VJP1233R	CONNECTOR(MALE) 6P	2	
P3403		VJP1235T	CONNECTOR(MALE) 8P	1	
P3404		VJP1231T	CONNECTOR(MALE) 4P	1	
P3405		VJP1230T	CONNECTOR(MALE) 3P	1	
P3407		VJP1230R	CONNECTOR(MALE) 3P	1	
P3409		VJP1235R	CONNECTOR(MALE) 8P	1	
Q3101,02		2SD636	TRANSISTOR	2	
Q3103-05		2SC2206	TRANSISTOR	3	
Q3106		2SB641	TRANSISTOR	1	
Q3107,08		2SC2206	TRANSISTOR	2	
Q3110		2SC2206	TRANSISTOR	1	
Q3111		2SD636	TRANSISTOR	1	
Q3112,13		2SC2206	TRANSISTOR	2	
Q3114		2SD636	TRANSISTOR	1	
Q3117		2SC2206	TRANSISTOR	1	
Q3118		2SD636	TRANSISTOR	1	
Q3119		2SB641	TRANSISTOR	1	
Q3201-03		2SC2206	TRANSISTOR	3	
Q3204,05		2SA1254	TRANSISTOR	2	
Q3206-08		2SC2206	TRANSISTOR	3	
Q3301		2SD636	TRANSISTOR	1	
Q3302		2SC2206	TRANSISTOR	1	
Q3303-05		2SB641	TRANSISTOR	3	
Q3401-05		2SB641	TRANSISTOR	5	
Q3406		2SD636	TRANSISTOR	1	
Q3407		2SB641	TRANSISTOR	1	
Q3408		2SD636	TRANSISTOR	1	
Q3409		2SB641	TRANSISTOR	1	
Q3410		2SC2206	TRANSISTOR	1	
Q3411		2SA1254	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q3412		2SB641	TRANSISTOR	1	
Q3413,14		2SD636	TRANSISTOR	2	
Q3415		2SD1273	TRANSISTOR	1	
Q3416-19		2SD636	TRANSISTOR	4	
Q3420		2SD1273	TRANSISTOR	1	
Q3421		2SD636	TRANSISTOR	1	
Q3422		2SB641	TRANSISTOR	1	
Q8201		2SC2206	TRANSISTOR	1	
Q8202,03		2SD636	TRANSISTOR	2	
QR3101		UN1112	TRANSISTOR-RESISTOR	1	
QR3103		UN1213	TRANSISTOR-RESISTOR	1	
QR3106,07		UN1213	TRANSISTOR-RESISTOR	2	
QR3111-14		2SD1676	TRANSISTOR-RESISTOR	4	
QR3115		UN1112	TRANSISTOR-RESISTOR	1	
QR3301		UN1111	TRANSISTOR-RESISTOR	1	
QR3302		UN1213	TRANSISTOR-RESISTOR	1	
QR3401,02		UN1213	TRANSISTOR-RESISTOR	2	
QR3403,04		UN1112	TRANSISTOR-RESISTOR	2	
QR3405		UN1213	TRANSISTOR-RESISTOR	1	
QR8201-03		UN1213	TRANSISTOR-RESISTOR	3	
			RESISTORS		
R3101		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3102		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3103		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3104		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3105,06		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3107,08		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	2	
R3109		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R3112		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3113		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R3114		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3115		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R3116		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3117		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3118		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R3119		ERDS2TJ334	C.RESISTOR 1/4W 330K	1	
R3120		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3121		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3122		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3123		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3124		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3125		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3126		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3127		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R3131,32		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R3133		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3134		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3136		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3137,38		ERDS2TJ561	C.RESISTOR 1/4W 560	2	
R3140,41		ERDS2TJ821	C.RESISTOR 1/4W 820	2	
R3148		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3149		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3150		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3151		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3152		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3155		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3158		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3160		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R3166,67		ERDS2TJ821	C.RESISTOR 1/4W 820	2	
R3168		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3169		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3170		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3171		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3172,73		ERDS2TJ823	C.RESISTOR 1/4W 82K	2	
R3176		ERDS2TJ820	C.RESISTOR 1/4W 82	1	
R3201		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3202		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3203-05		ERDS2TJ102	C.RESISTOR 1/4W 1K	3	
R3206		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3207		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3208		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3209		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3210		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3211		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3212		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3213		ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R3214		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3215		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3216		ERDS2TJ560	C.RESISTOR 1/4W 56	1	
R3217		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3218,19		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3220		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3221		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3222		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3223-26		ERDS2TJ102	C.RESISTOR 1/4W 1K	4	
R3227,28		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	2	
R3229		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R3230		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R3301		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R3302		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R3303		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3304		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R3305		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3306		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3307		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3308		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R3309		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3310		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R3311		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3312		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3313		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R3314		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3316		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3317		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R3318		ERTD2ZHL333S	THERMISTOR 33K	1	
R3319		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3321		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3322		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3323		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3324		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3401		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3402		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3403		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3404		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3405		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R3406		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3407		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R3408		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R3409		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3410		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R3411		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R3412		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3413		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3414		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R3415-17		ERDS2TJ102	C.RESISTOR 1/4W 1K	3	
R3418		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3419,20		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3421		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3422,23		ERDS2TJ471	C.RESISTOR 1/4W 470	2	
R3424,25		ERDS2TJ750	C.RESISTOR 1/4W 75	2	
R3426,27		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3428		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R3429,30		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3431		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3432		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3433		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R3434		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3435,36		ERDS2TJ681	C.RESISTOR 1/4W 680	2	
R3437		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R3438,39		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3440		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R3441		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3442		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3443		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3444		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3445		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3446		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3447		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3448		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3449		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3450		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
R3451		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3452,53		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	2	
R3454		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3455		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R3456		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3457,58		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3459,60		ERDS2TJ223	C.RESISTOR 1/4W 22K	2	
R3461		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3462		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3463,64		ERDS2TJ223	C.RESISTOR 1/4W 22K	2	
R3465		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R3466		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3467		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3468		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3469		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3470		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3471		ERDS2TJ220	C.RESISTOR 1/4W 22	1	
R3472		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3473		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R3474		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3475		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3476		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3477,78		ERDS2TJ471	C.RESISTOR 1/4W 470	2	
R3479,80		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3481		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3482-84		ERDS2TJ102	C.RESISTOR 1/4W 1K	3	
R3485-87		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	3	
R3488		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R3489		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3490		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3491		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R3492,93		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R3494		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3495		ERDS2TJ1R0	C.RESISTOR 1/4W 1.0	1	
R3496,97		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3499		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R3501		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3502		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3503		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R3504		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R3506		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3507		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3508		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R3509		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R3510,11		ERDS2TJ391	C.RESISTOR 1/4W 390	2	
R8201		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R8202		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8203		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R8204		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R8205		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R8206		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R8207		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R8208		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R8209		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R8210		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R8211		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R8212		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R8213		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R8214		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R8215		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R8216		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R8217		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R8218		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R8219		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R8220		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R8221		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R8222		ERDS2TJ334	C.RESISTOR 1/4W 330K	1	
R8223,24		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8225		ERDS2TJ391	C. RESISTOR 1/4W 390	1	
R8226		ERDS2TJ183	C. RESISTOR 1/4W 18K	1	
R8227		ERDS2TJ102	C. RESISTOR 1/4W 1K	1	
R8228		ERDS2TJ153	C. RESISTOR 1/4W 15K	1	
R8229		ERDS2TJ391	C. RESISTOR 1/4W 390	1	
R8230		ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R8231,32		ERDS2TJ102	C. RESISTOR 1/4W 1K	2	
R8233		ERDS2TJ471	C. RESISTOR 1/4W 470	1	
VR3101		EVN38CA00B23	V. RESISTOR 2K	1	
VR3102,03		EVN38CA00B52	V. RESISTOR 500	2	
VR3104		EVN38CA00B23	V. RESISTOR 2K	1	
VR3301		EVN38CA00B53	V. RESISTOR 5K	1	
VR3302		EVN38CA00B13	V. RESISTOR 1K	1	
VR3401		EVN38CA00B14	V. RESISTOR 10K	1	
VR3402,03		EVN38CA00B53	V. RESISTOR 5K	2	
VR3404		EVN38CA00B54	V. RESISTOR 50K	1	
VR3405		EVN38CA00B23	V. RESISTOR 2K	1	
VR3406		EVN38CA00B54	V. RESISTOR 50K	1	
VR8201,02		EVN38CA00B13	V. RESISTOR 1K	2	
VR8203		EVN38CA00B53	V. RESISTOR 5K	1	
X3301		VSX0189	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMX0985	SPACER	3	
		VKC0271	HINGE	2	
	■	VEP03541A	LUMINANCE/CHROMINANCE		(NLA)
			SEPARATION C.B.A.		
			CAPACITORS		
C3701-04		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C3705		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3707-10		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C3711		ECUX1H330JCN	CHIP 50V 33P	1	
C3712		ECUX1H220JCN	CHIP 50V 22P	1	
C3713		ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1	
C3714		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3715		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3716-19		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C3720		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3721,22		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C3723		ECUX1H121JCN	CHIP 50V 120P	1	
C3724		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3725		ECEA1CK100	E. CAPACITOR 16V 10U	1	
C3727		ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C3728		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3729		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3730		ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C3732		ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3733		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3734		ECUX1H220JCN	CHIP 50V 22P	1	
C3735		ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3736		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3737		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3738		ECUM1H271KBN	CHIP 50V 270P	1	
C3739		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3740		ECUX1H470JCN	CHIP 50V 47P	1	
C3741		ECUX1H270JCN	CHIP 50V 27P	1	
C3748		ECEA1EKN4R4	E. CAPACITOR 25V 4.4U	1	
C3749,50		ECEA0JK470	E. CAPACITOR 6.3V 47U	2	
C3756		ECUX1H390JCN	CHIP 50V 39P	1	
C3762		ECCF1H180JC	C. CAPACITOR 50V 18P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3801		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3802		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3804		ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C3805		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C3806		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C3807		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3808		ECUX1H560JCN	CHIP 50V 56P	1	
C3809		ECUX1H102KBN	CHIP 50V 1000P	1	
C3810		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C3811		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3812		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C3813		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3816		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3901		ECUX1H473ZFN	CHIP 50V 0.047U	1	
C3902		ECUX1H472KBN	CHIP 50V 4700P	1	
C3904-10		ECUX1H103ZFN	CHIP 50V 0.01U	7	
C3911		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3912-19		ECUX1H103ZFN	CHIP 50V 0.01U	8	
C3921-27		ECUX1H103ZFN	CHIP 50V 0.01U	7	
C3929-32		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C3933		ECUX1H121JCN	CHIP 50V 120P	1	
C3934		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C8301		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8302-05		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C8306		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8307		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C8308		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C8309		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8310-12		ECUX1H103ZFN	CHIP 50V 0.01U	3	
C8313		ECV1ZW90X64T	TRIMMER 90P	1	
C8315-20		ECUX1H103ZFN	CHIP 50V 0.01U	6	
C8321		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C8322		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8323		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
D3701		MA165	DIODE	1	
D3703		MA165	DIODE	1	
D3801-03		MA165	DIODE	3	
D3901		MA151A	DIODE	1	
D8301		MA165	DIODE	1	
DL3701		VLD0147	DELAY	1	
FL3701		ELB4R034	FILTER	1	
FL3901		VLF0523	FILTER	1	
FL3902		VLF0568	FILTER	1	
FL3903		ELXTS470GA	FILTER	1	
FL3904		VLF0526	FILTER	1	
FL3905,06		ELB4R039	FILTER	2	
FL3907		VLF0526	FILTER	1	
FL8301		ELB4P028	FILTER	1	
IC3701		AN3294K	IC	1	
IC3702		M52055P	IC	1	
IC3801		MN1550VNT	IC	1	
IC3802		MN1280R	IC	1	
IC3803		UPD74HC00G	IC	1	
IC3804		LM393PS	IC	1	
IC3901		MN3106	IC	1	<R>
IC3902,03		MN3802A	IC	2	
IC8301		M52055P	IC	1	
IC8302		AN6367K	IC	1	
IC8303		BU3781F	IC	1	
L3701-03		VLQEL05F101K	COIL 100UH	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L3704		VLQEL05F330K	COIL 33UH	1	
L3705		VLQEL05F560K	COIL 56UH	1	
L3706		VLQEL05F101K	COIL 100UH	1	
L3707		VLQEL05F8R2K	COIL 8.2UH	1	
L3708		VLQEL05F101K	COIL 100UH	1	
L3709		VLQEL05F560K	COIL 56UH	1	
L3710		VLQEL05F101K	COIL 100UH	1	
L3711		VLQEL05F270K	COIL 27UH	1	
L3712		VLQEL05F470K	COIL 47UH	1	
L3715		VLQEL05F330K	COIL 33UH	1	
L3716		VLQEL05F560K	COIL 56UH	1	
L3801		VLQEL05F101K	COIL 100UH	1	
L3803		VLQ0213K4R7T	COIL 4.7UH	1	
L3804		VLQ0213K101	COIL 10UH	1	
L3901		VLQEL05F101K	COIL 100UH	1	
L8301,02		VLQEL05F101K	COIL 100UH	2	
P3701		VJP1233T	CONNECTOR(MALE) 6P	1	
P3702		VJP1230T	CONNECTOR(MALE) 3P	1	
P3801		VJP1233T	CONNECTOR(MALE) 6P	1	
P3802		VJP1230R	CONNECTOR(MALE) 3P	1	
P3803		VJP1233R	CONNECTOR(MALE) 6P	1	
P3804		VJP1232T	CONNECTOR(MALE) 5P	1	
P3805		VJP1230T	CONNECTOR(MALE) 3P	1	
P8301		VJP1236T	CONNECTOR(MALE) 9P	1	
Q3701		2SC2295	TRANSISTOR	1	
Q3702		2SD601	TRANSISTOR CHIP	1	
Q3704		2SA1022	TRANSISTOR	1	
Q3705		2SC2295	TRANSISTOR	1	
Q3706		2SB709	TRANSISTOR CHIP	1	
Q3710,11		2SD601	TRANSISTOR CHIP	2	
Q3712		2SB709	TRANSISTOR CHIP	1	
Q3713		2SC2295	TRANSISTOR	1	
Q3715		2SB709	TRANSISTOR CHIP	1	
Q3716		2SC2295	TRANSISTOR	1	
Q3719		2SD601	TRANSISTOR CHIP	1	
Q3801		2SB709	TRANSISTOR CHIP	1	
Q3901		2SB709	TRANSISTOR CHIP	1	
Q3902		2SC2295	TRANSISTOR	1	
Q3903		2SA1022	TRANSISTOR CHIP	1	
Q3905,06		2SC2295	TRANSISTOR	2	
Q3907,08		2SD601	TRANSISTOR CHIP	2	
Q8301		2SC2295	TRANSISTOR	1	
Q8302		2SB709	TRANSISTOR CHIP	1	
QR3701,02		UN2213	TRANSISTOR-RESISTOR	2	
QR3703		UN1213	TRANSISTOR-RESISTOR	1	
QR3801		UN2112	TRANSISTOR-RESISTOR	1	
QR3802		UN2111	TRANSISTOR-RESISTOR	1	
QR8301		UN2212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R3701		ERJ6GEYJ333	CHIP 1/10W 33K	1	
R3702		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R3703		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R3704		ERJ6GEYJ681	CHIP 1/10W 680	1	
R3706		ERJ6GEYJ101	CHIP 1/10W 100	1	
R3707,08		ERJ6GEYJ223	CHIP 1/10W 22K	2	
R3709		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3711		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3714		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3715		ERJ6GEYJ271	CHIP 1/10W 270	1	
R3716		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R3717		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R3718,19		ERJ6GEYJ273	CHIP 1/10W 27K	2	
R3720		ERJ6GEYJ153	CHIP 1/10W 15K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3724		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3725		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R3726		ERJ6GEYJ471	CHIP 1/10W 470	1	
R3727		ERJ6GEYJ271	CHIP 1/10W 270	1	
R3728		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3729		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R3730,31		ERJ6GEYJ561	CHIP 1/10W 560	2	
R3734		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R3738		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R3739		ERJ6GEYJ112	M.RESISTOR CH1/10W 1.1K	1	
R3740,41		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R3742,43		ERJ6GEYJ123	CHIP 1/10W 12K	2	
R3744		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3745		ERJ6GEYJ471	CHIP 1/10W 470	1	
R3747		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R3750		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R3753,54		ERJ6GEYJ561	CHIP 1/10W 560	2	
R3755,56		ERJ6GEYJ562	CHIP 1/10W 5.6K	2	
R3757		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3763		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R3768		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R3769		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3770		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R3801		ERDS1TJ470	C.RESISTOR 1/2W 47	1	
R3802		ERJ6GEYJ331	CHIP 1/10W 330	1	
R3803		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3804		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R3805-07		ERJ6GEYJ102	CHIP 1/10W 1K	3	
R3808		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R3809		ERJ6GEYJ220	CHIP 1/10W 22	1	
R3811,12		ERJ6GEYJ472	CHIP 1/10W 4.7K	2	
R3813		ERJ6GEYJ393	CHIP 1/10W 39K	1	
R3814		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R3815,16		ERJ6GEYJ224	CHIP 1/10W 220K	2	
R3817		ERJ6GEYJ274	CHIP 1/10W 270K	1	
R3818,19		ERJ6GEYJ124	CHIP 1/10W 120K	2	
R3821		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R3822		ERJ6GEYJ123	CHIP 1/10W 12K	1	
R3823		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R3901		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3902		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R3903,04		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R3905		ERJ6GEYJ471	CHIP 1/10W 470	1	
R3907-10		ERJ6GEYJ103	CHIP 1/10W 10K	4	
R3911,12		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R3913		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R3914		ERJ6GEYJ123	CHIP 1/10W 12K	1	
R3915		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R3916,17		ERJ6GEYJ222	CHIP 1/10W 2.2K	2	
R3918		ERJ6GEYJ821	CHIP 1/10W 820	1	
R3919		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3920		ERJ6GEYJ681	CHIP 1/10W 680	1	
R3921		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R3922		ERJ6GEYJ681	CHIP 1/10W 680	1	
R3924		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R3925,26		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R3927		ERJ6GEYJ471	CHIP 1/10W 470	1	
R3928,29		ERJ6GEYJ561	CHIP 1/10W 560	2	
R3930		ERJ6GEYJ331	CHIP 1/10W 330	1	
R3931		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R3932		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R3933		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R3934		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R8301,02		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R8303,04		ERJ6GEYJ822	CHIP 1/10W 8.2K	2	
R8305		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R8306		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R8307		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R8308		ERJ6GEYJ122	CHIP 1/10W 1.2K	1	
R8309		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R8310		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R8315		ERJ6GEYJ333	CHIP 1/10W 33K	1	
R8316		ERJ6GEYJ184	CHIP 1/10W 180K	1	
R8317		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R8318		ERJ6GEYJ151	CHIP 1/10W 150	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8319		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R8320		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R8321,22		ERJ6GEYJ474	CHIP 1/10W 470K	2	
R8323		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R8324,25		ERJ6GEYJ124	CHIP 1/10W 120K	2	
R8326		ERJ6GEYJ334	CHIP 1/10W 330K	1	
R8327		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R8328,29		ERJ6GEYJ103	CHIP 1/10W 10K	2	
TH3901		ERTD2FHL332S	THERMISTOR	1	
TH3902		ERTD2FHL102S	THERMISTOR 1K	1	
VR3701,02		EVN3ACA00B24	V.RESISTOR 20K	2	
VR3703,04		EVN3ACA00B52	V.RESISTOR 500	2	
VR3707		EVN3ACA00B22	VARIABLE 200	1	
VR3708		EVN3ACA00B23	V.RESISTOR 2K	1	
X3801		VSX0176	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2562	SHIELD CASE(MAIN)	1	
		VSC2563	SHIELD CASE(TOP,BOTTOM)	2	
	■	VEP05111B	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C501		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C505		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C506		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C507		ECUX1E473ZFN	CHIP 25V 0.047U	1	
C508		ECUX1E104ZFN	CHIP 25V 0.1U	1	
C509-12		ECUX1H103ZFN	CHIP 50V 0.01U	4	
C513		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C514		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C515		ECUX1H102KBN	CHIP 50V 1000P	1	
C517		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C518,19		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C521,22		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C524		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C526		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C527		ECUX1H102KBN	CHIP 50V 1000P	1	
C528,29		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C530		ECUX1E473ZFN	CHIP 25V 0.047U	1	
C531		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C534		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C535		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C536		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C538		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C539		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C551		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C552		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C553		ECUX1E473ZFN	CHIP 25V 0.047U	1	
C554		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C555		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C556,57		ECUX1H101JCN	CHIP 50V 100P	2	
C558		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C559,60		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	2	
C561		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C562,63		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C564-66		ECUX1E104ZFN	CHIP 25V 0.1U	3	
C567,68		ECUX1H100DCN·	CHIP 50V 10P	2	
IC501		AN3224K	IC	1	
IC502		AN3311S	IC	1	
IC551		UPC1531HA	IC	1	
L501		VLQEL05F101K	COIL 100UH	1	
L505		VLQEL05F101K	COIL 100UH	1	
L552,53		VLQEL05F101K	COIL 100UH	2	
L554,55		VLQ0211K2R2	COIL 20.UH	2	
P002		VJS1927	CONNECTOR (FEMALE)	1	
P501		VJP1248T	CONNECTOR(MALE) 8P	1	
P502		VJP1236T	CONNECTOR(MALE) 9P	1	
Q501		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q551		2SB643	TRANSISTOR	1	(Q,R,S)
Q552		2SD1306	TRANSISTOR	1	
QR551,52		2SD1777CI	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R501		ERJ6GMYJ392	CHIP 1/10W 3.9K	1	
R502		ERJ6GMYJ102	CHIP 1/10W 1K	1	
R505		ERJ6GMYJ102	CHIP 1/10W 1K	1	
R506		ERJ6GMYJ471	CHIP 1/10W 470	1	
R508,09		ERJ6GMYJ100	CHIP 1/10W 10	2	
R510-12		ERJ6GMYJ821	CHIP 1/10W 820	3	
R514		ERJ6GMY0R00	CHIP 1/16W 0	1	
R515		ERJ6GMYJ102	CHIP 1/10W 1K	1	
R516		ERJ6GMYJ152	CHIP 1/10W 1.5K	1	
R517		ERJ6GMYJ681	CHIP 1/10W 680	1	
R519,20		ERJ6GMYJ100	CHIP 1/10W 10	2	
R522		ERJ6GMYJ821	CHIP 1/10W 820	1	
R551,52		ERJ6GMYJ101	CHIP 1/10W 100	2	
R553		ERJ6GMYJ153	CHIP 1/10W 15K	1	
R554,55		ERJ6GMYJ393	CHIP 1/10W 39K	2	
R556		ERJ6GMYJ153	CHIP 1/10W 15K	1	
R557		ERJ6GMYJ332	CHIP 1/10W 3.3K	1	
R558,59		ERJ6GMYJ181	CHIP 1/10W 180	2	
R560		ERJ6GMYJ220	M.RESISTOR CH1/16W 22	1	
R561		ERJ6GMYJ271	CHIP 1/10W 270	1	
R562,63		ERJ6GMYJ100	CHIP 1/10W 10	2	
R564		ERJ6GMYJ153	CHIP 1/10W 15K	1	
R565,66		ERJ6GMYJ103	CHIP 1/10W 10K	2	
R567		ERJ6GMYJ101	CHIP 1/10W 100	1	
R568		ERJ6GMYJ182	CHIP 1/10W 1.8K	1	
R569,70		ERJ6GMYJ471	CHIP 1/10W 470	2	
VR501,02		EVND1AA00B23	V.RESISTOR 2K	2	
			MISCELLANEOUS		
		VSC1832	SHIELD CASE(TOP)	1	
		VSC1833	SHIELD CASE(MAIN)	1	
		VSC1834	SHIELD CASE(BOTTOM)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP06474C	OPERATION C.B.A.		(NLA)
			CAPACITORS		
C6501,02		ECQB1H223KH	P.CAPACITOR 50V 0.022U	2	
D6501		LN81RCPHL	LED	1	
D6502		LN38GCPPSVT	LED	1	
D6503-07		MA165	DIODE	5	
P6501		VJP1251T	CONNECTOR(MALE) 11P	1	
P6502		VJP1929T	CONNECTOR (MALE)	1	
P6503		VJP1244T	CONNECTOR(MALE) 4P	1	
P6504		VJP1231T	CONNECTOR(MALE) 4P	1	
P6505		VJP1235T	CONNECTOR(MALE) 8P	1	
P6506		VJP1243T	CONNECTOR(MALE) 3P	1	
QR6501		UN1213	TRANSISTOR-RESISTOR	1	
QR6502		UN1113	TRANSISTOR-RESISTOR	1	
QR6503		UN1212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6501		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R6504		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6507		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R6508		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6509		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R6511		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
SW6501-03		EVQQS307K	SWITCH	3	
SW6504		ESD14316	SWITCH	1	
SW6506		ESD14314	SWITCH	1	
SW6507,08		ESD14316	SWITCH	2	
SW6510		ESD14316	SWITCH	1	
SW6511-13		ESD14314	SWITCH	3	
VR6501,02		EVUFSAE04B15	V.RESISTOR 100K	2	
VR6503		EVUJ16E04B24	V.RESISTOR 20K	1	
VR6504		EVJVGAE05C23	V.RESISTOR 2K	1	
			MISCELLANEOUS		
		KL04	LED SPACER	1	
		VGU2473	SELECT KNOB	3	(INPUT/AUDIO METER/
					EDIT)
		VGU2707	SW KNOB	5	(AGC/MPX/TAPE SPEED/
					S-VHS/SIMUL)
		VMD0504	LED HOLDER	1	
	■	VEP01355B	VPS/POWER 2 C.B.A.		NV-FS1B(NLA)
		VEP01355A			NV-FS1EB(NLA)
			CAPACITORS		
C1201		ECEA1EK100	E.CAPACITOR 25V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1202		ECEA1EU101	E.CAPACITOR 25V 100U	1	
C1203		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C1204		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C1205		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C1206,07		ECEA1AK101	E.CAPACITOR 10V 100U	2	
C7801		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	NV-FS1EB
C7815		VCYD1C104MR	S.CAPACITOR 16V 0.1U	1	NV-FS1EB
C7816		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	NV-FS1EB
C7821		ECKF1H151KB	C.CAPACITOR 50V 150P	1	NV-FS1EB
C7822		ECQV1H333JZ	MYLAR 50V 0.033U	1	NV-FS1EB
C7823		ECCF1H470JC	C.CAPACITOR 50V 47P	1	NV-FS1EB
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	NV-FS1EB
C7852		ECEA1AK101	E.CAPACITOR 10V 100U	1	NV-FS1EB
C7853,54		ECCF1H330JC	C.CAPACITOR 50V 33P	2	NV-FS1EB
C7855,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	NV-FS1EB
C7860		ECEA0JK101U	E.CAPACITOR 6.3V 100U	1	NV-FS1EB
D1201		AK04V2	DIODE	1	
D1202,03		MA4056H	DIODE	2	
D7851		MA165	DIODE	1	NV-FS1EB
IC7851		MN158412VYR	IC	1	NV-FS1EB
IC7852		MN1280T	IC	1	NV-FS1EB
IC7853		SDA5642	IC	1	NV-FS1EB
L1201		VLQEL05F101K	COIL 100UH	1	
P1201		VJP1230T	CONNECTOR(MALE) 3P	1	
P7801		VJP1234T	CONNECTOR(MALE) 7P	1	
P7802		VJP1231T	CONNECTOR(MALE) 4P	1	NV-FS1EB
Q1201		2SD973A	TRANSISTOR CHIP	1	
Q1202		2SD661	TRANSISTOR	1	
Q1203		2SD655	TRANSISTOR	1	
QR7801		UN1111	TRANSISTOR-RESISTOR	1	NV-FS1EB
QR7802		UN1213	TRANSISTOR-RESISTOR	1	NV-FS1EB
QR7851		UN1211	TRANSISTOR-RESISTOR	1	NV-FS1EB
QR7852		UN1213	TRANSISTOR-RESISTOR	1	NV-FS1EB
			RESISTORS		
R1201		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R1202		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R1203		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1204		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R1205		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R7801		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	NV-FS1EB
R7802		ERDS2TJ824	C.RESISTOR 1/4W 820K	1	NV-FS1EB
R7803,04		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	NV-FS1EB
R7805		ERDS2TJ824	C.RESISTOR 1/4W 820K	1	NV-FS1EB
R7806		ERDS2TJ101	C.RESISTOR 1/4W 100	1	NV-FS1EB
R7807		EROS2CKG5101	M.RESISTOR 1/4W 5.1K	1	NV-FS1EB
R7808		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	NV-FS1EB
R7821		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	NV-FS1EB
R7822		ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	NV-FS1EB
R7851		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	NV-FS1EB
R7860		ERDS2TJ471	C.RESISTOR 1/4W 470	1	NV-FS1EB
T1201		VLT0564	TRANSFOMER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
X7851		EF0A4R0M03C2	CRYSTAL OSCILLATOR	1	NV-FS1EB
	■	VEP07517A	TV DEMODULATOR INTERFACE		NV-FS1B(NLA)
	■	VEP07517B	C. B. A.		NV-FS1EB(NLA)
			CAPACITORS		
C701,02		ECEA1CK100	E. CAPACITOR 16V 10U	2	
C703		ECEA1HK2R2	E. CAPACITOR 50V 2.2U	1	
C706		ECQV1H823JZ	P. CAPACITOR 50V 0.082U	1	
C707		ECEA1HKS010	E. CAPACITOR 50V 1U	1	
C710		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C715		ECUX1H103ZFN	CHIP 50V 0.01U		NV-FS1B
C716		ECUX1H103ZFN	CHIP 50V 0.01U		NV-FS1B
C717-20		ECUX1H103ZFN	CHIP 50V 0.01U	6	
C721		ECEA1HKR27	E. CAPACITOR 50V 0.27U	1	
C722		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C723		ECUM1H120JCN	C. CAPACITOR CH 50V 12P	1	NV-FS1B
C723		ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	NV-FS1EB
C725		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C731		ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C732		ECQV1H224JZ	P. CAPACITOR 50V 0.22U	1	
C734		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C735		ECUX1H070DCN	CHIP 50V 7P	1	
C736		ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	
C737		ECUX1H151JCN	CHIP 50V 150P	1	
C739		ECEA1HK010	E. CAPACITOR 50V 1U	1	
C740		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C741		ECEA1CK100	E. CAPACITOR 16V 10U	1	
C742		ECUX1H030DCN	CHIP 50V 3P	1	
C743		ECUX1H270JSN	CHIP 50V 27P	1	
C744		ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C745		ECUX1H680JPN	CHIP 50V 68P	1	
C746		ECUX1H150JCN	CHIP 50V 15P	1	
C747		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C748		ECEA1CK330	E. CAPACITOR 16V 33U	1	
C749		ECEA1CK100	E. CAPACITOR 16V 10U	1	
C760		ECQV1H473JZ	P. CAPACITOR 50V 0.047U	1	
C781		ECUX1H390JCN	CHIP 50V 39P	1	NV-FS1B
C781		ECUX1H220JCN	CHIP 50V 22P	1	NV-FS1EB
C782		ECUM1H060DCN	CHIP 50V 6P	1	
C7651		ECEA1CK100	E. CAPACITOR 16V 10U	1	
C7652		ECEA1CKN330	E. CAPACITOR 16V 33U	1	
C7653		ECQB1H392JH	P. CAPACITOR 50V 3900P	1	
C7654		ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	
C7655,56		ECEA1HK010	E. CAPACITOR 50V 1U	2	
C7657		ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C7658		ECQP1562JZ	P. CAPACITOR 100V 5600P	1	
C7659		ECQB1H272JH	P. CAPACITOR 50V 2700P	1	
C7951		ECUX1H331JCN	CHIP 50V 330P	1	
C7953		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7954		ECEA1HKR27	E. CAPACITOR 50V 0.27U	1	
C7955-59		ECUX1H103ZFN	CHIP 50V 0.01U	5	
C7961		ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C7962		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7963		ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C7964		ECUX1H270JSN	CHIP 50V 27P	1	
C7965		ECUX1H030DCN	CHIP 50V 3P	1	
C7966		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7967		ECEA1HK010	E. CAPACITOR 50V 1U	1	
C7968,69		ECEA1CK100	E. CAPACITOR 16V 10U	2	
C7970		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7971		ECEA1CK100	E. CAPACITOR 16V 10U	1	
C7972		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C7973,74		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7975		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C7976,77		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7978		ECEA1CK100	E. CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D712		MA27W	DIODE	1	
D713		MA28W	DIODE	1	
D771		MA151WK	DIODE	1	NV-FS1EB
D799		MA165	DIODE	1	
D7951		MA3100L	DIODE	1	
FL7951		VLF0702	FILTER	1	NV-FS1B
FL7951		VLF0703	FILTER	1	NV-FS1EB
IC701		M51366SP	IC	1	
IC7651		AN5421	IC	1	
IC7951		M51366SP	IC	1	
L702		VLQEL05F680K	COIL 68UH	1	
L711		VLQ0305J1R2	COIL 1.2UH	1	
L712		VLQ0305JR82T	COIL 0.82UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L715		VLQ0213K680	COIL 68UH	1	
L717,18		VLQEL05F680K	COIL 68UH	2	
L719		VLQEL05F120K	COIL 12UH	1	
L781		VLQEL05F330K	COIL 33UH	1	
L7952		VLQEL05F680K	COIL 68UH	1	
L7953		VLQ0305JR82T	COIL 0.82UH	1	
L7955		VLQEL05F680K	COIL 68UH	1	
L7957		VLQEL05F680K	COIL 68UH	1	
P701		VJP1231T	CONNECTOR(MALE) 4P	1	
P702		VJP1961	CONNECTOR (MALE)	1	
P703		VJP1239T	CONNECTOR(MALE) 12P	1	
P705		VJP1238T	CONNECTOR(MALE) 11P	1	
P706		VJP1229	CONNECTOR(MALE) 2P	1	
P707		VJP1229T	CONNECTOR(MALE) 2P	1	
Q703		2SD601	TRANSISTOR	1	(S,T)
Q710		2SC1047	TRANSISTOR	1	(C)
Q713		2SD1328	TRANSISTOR CHIP	1	(S,T)
Q714		2SD601	TRANSISTOR CHIP	1	
Q771		2SD601	TRANSISTOR	1	(S,T)
Q772		2SK198	TRANSISTOR	1	NV-FS1EB
Q773		2SK198	TRANSISTOR	1	NV-FS1EB
Q790		2SD601	TRANSISTOR	1	(S,T)
Q7951		2SC1047	TRANSISTOR	1	(C)
Q7952		2SB709	TRANSISTOR	1	(S,T)
Q7953		2SC2404	TRANSISTOR CHIP	1	(C,D)
Q7954		2SC1317	TRANSISTOR	1	
Q7955		2SB709	TRANSISTOR	1	(S,T)
QR701,02		UN2213	TRANSISTOR-RESISTOR	2	
QR711		UN2212	TRANSISTOR-RESISTOR	1	NV-FS1EB
QR712		UN2212	TRANSISTOR-RESISTOR	1	NV-FS1EB
QR713		UN2211	TRANSISTOR-RESISTOR	1	
QR799		DTC124TA	TRANSISTOR RESISTOR	1	
			RESISTORS		
R707		ERJ6GEYJ103	CHIP 1/10W 10K	1	NV-FS1B
R707		ERJ6GEYJ223	CHIP 1/10W 22K	1	NV-FS1EB
R712		ERJ6GEYJ682	CHIP 1/10W 6.8K	1	NV-FS1B
R713		ERJ6GEYJ681	CHIP 1/10W 680	1	NV-FS1B

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R714		ERD2FCG330	C.RESISTOR 2W 33	1	NV-FS1B
R715		ERJ6GEYJ271	CHIP 1/10W 270	1	NV-FS1B
R716		ERJ6GEYJ272	CHIP 1/10W 2.7K	1	
R717		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R718		ERJ6GEYJ754	CHIP 1/10W 750K	1	
R719		ERJ6GEYJ682	CHIP 1/10W 6.8K	1	
R720		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R721		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R722		ERJ6GEYJ432	CHIP 1/10W 4.3K	1	NV-FS1EB
R723		ERJ6GEYJ183	CHIP 1/10W 180K	1	
R724		ERJ6GEYJ101	CHIP 1/10W 100	1	
R725		ERJ6GEYJ182	CHIP 1/10W 1.8K	1	
R726		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R727		ERJ6GEYJ471	CHIP 1/10W 470	1	
R729,30		ERJ6GEYJ331	CHIP 1/10W 330	2	
R737		ERJ6GEYJ274	CHIP 1/10W 270K	1	
R738		ERJ6GEYJ334	CHIP 1/10W 330K	1	
R739		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R740		ERJ6GEYJ473	CHIP 1/10W 47K	1	
R741,42		ERJ6GEYJ272	CHIP 1/10W 2.7K	2	
R743		ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R744		ERJ6GEYJ821	CHIP 1/10W 820	1	
R745		ERJ6GEYJ331	CHIP 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R750		ERJ6GEYJ182	CHIP 1/10W 1.8K	1	
R757		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R759		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R760		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R763		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R764		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R772		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R773		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R774		ERJ6GEYJ333	CHIP 1/10W 33K	1	NV-FS1EB
R775		ERJ6GEYJ474	CHIP 1/10W 470K	1	NV-FS1EB
R776		ERJ6GEYJ105	CHIP 1/10W 1M	1	NV-FS1EB
R777		ERJ6GEYJ184	CHIP 1/10W 180K	1	NV-FS1EB
R778		ERJ6GEYJ105	CHIP 1/10W 1M	1	NV-FS1EB
R779		ERJ6GEYJ104	CHIP 1/10W 100K	1	NV-FS1EB
R781		ERJ6GEYJ681	CHIP 1/10W 680	1	NV-FS1B
R781		ERJ6GEYJ271	CHIP 1/10W 270	1	NV-FS1EB
R782		ERJ6GEYJ821	CHIP 1/10W 820	1	
R790		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R791		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R792		ERJ6GEYJ120	CHIP 1/10W 12	1	
R793		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R7651		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R7654		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R7655		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R7656		ERJ6GEYJ151	CHIP 1/10W 150	1	
R7657		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R7658		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R7659		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R7661		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R7662		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R7663		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7664		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7951		ERJ6GEYJ153	CHIP 1/10W 15K	1	
R7956		ERJ6GEYJ754	CHIP 1/10W 750K	1	
R7957		ERJ6GEYJ332	CHIP 1/10W 3.3K	1	
R7958		ERJ6GEYJ272	CHIP 1/10W 2.7K	1	
R7959		ERJ6GEYJ271	CHIP 1/10W 270	1	
R7960		ERJ6GEYJ682	CHIP 1/10W 6.8K	1	
R7961		ERJ6GEYJ681	CHIP 1/10W 680	1	
R7962		ERD2FCG330	C.RESISTOR 2W 33	1	
R7963		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R7964		ERJ6GEYJ821	CHIP 1/10W 820	1	
R7965		ERJ6GEYJ182	CHIP 1/10W 1.8K	1	
R7966		ERJ6GEYJ470	CHIP 1/10W 47	1	
R7967		ERJ6GEYJ473	CHIP 1/10W 47K	1	
R7968		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R7969		ERJ6GEYJ102	CHIP 1/10W 1K	1	
R7971		ERJ6GEYJ471	CHIP 1/10W 470	1	
R7972		ERJ6GEYJ821	CHIP 1/10W 820	1	
R7973		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R7974		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7975,76		ERJ6GEYJ471	CHIP 1/10W 470	2	
R7978		ERJ6GEYJ150	CHIP 1/10W 15	1	
R7979		ERJ6GEYJ561	CHIP 1/10W 560	1	
R7980		ERJ6GEYJ102	CHIP 1/10W 1K	1	
T703		EIV5EC005A	TRANSFORMER	1	NV-FS1B
T703		EIV5EC013A	TRANSFORMER	1	NV-FS1EB
T704		EIV5EC007A	TRANSFORMER	1	NV-FS1B
T704		EIV5EC006A	TRANSFORMER	1	NV-FS1EB
T711		EIS5EC008A	TRANSFORMER	1	NV-FS1B
T711		EIS5EC004A	TRANSFORMER	1	NV-FS1EB
T7951		EIV5EC005A	TRANSFORMER	1	NV-FS1B
T7951		EIV5EC013A	TRANSFORMER	1	NV-FS1EB
VR701		EVNE4AA00B23	V.RESISTOR 2K	1	
VR702		EVNE4AA00B23	V.RESISTOR 2K	1	NV-FS1EB
VR741		EVN38CA00B14	V.RESISTOR 10K	1	
VR751		EVN38CA00B53	V.RESISTOR 5K	1	
VR7660		EVN38CA00B23	V.RESISTOR 2K	1	
X710		EFCH39MSP3	FILTER	1	NV-FS1B
X710		EFCH38MSP1	FILTER	1	NV-FS1EB
X711		EFCS6R0MW5	FILTER	1	NV-FS1B
X711		EFCS5R5MW5	FILTER	1	NV-FS1EB
X712		EFCS6R0MS5	FILTER	1	NV-FS1B
X712		EFCS5R5MS5	FILTER	1	NV-FS1EB
X7951		EFCH39MQS1	FILTER	1	NV-FS1B
X7951		EFCH38MQS1	FILTER	1	NV-FS1EB
			MISCELLANEOUS		
		ENC87952	RF CONVERTER UNIT	1	NV-FS1B
		ENC87954	RF CONVERTER UNIT	1	NV-FS1EB
		ENV87806F2	TUNER UNIT	1	NV-FS1B
		ENV57817F1	TUNER UNIT	1	NV-FS1EB
		VSC1788	SHIELD CASE(TOP)	1	
		VSC1789	SHIELD CASE(MAIN)	1	
		VSC1888	SHIELD CASE(BOTTOM)	1	
		VSC2595	SHIELD CASE	1	
		VSC2113	SHIELD CASE	1	
		VSC2594	SHIELD CASE	1	
	■	VEP07513A	NICAM DECODER C.B.A.		(NLA)
			CAPACITORS		
C7301		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7302		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C7303		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7304		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C7305,06		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7307		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7308-10		ECUX1H103ZFN	CHIP 50V 0.01U	3	
C7311		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C7312,13		ECUX1H470JCN	CHIP 50V 47P	2	
C7314		ECQP1H681JZ	P.CAPACITOR 50V 680P	1	
C7315		ECEA1CPB100	E.CAPACITOR 16V 10U	1	
C7316		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C7317		ECQP1H122JZ	P.CAPACITOR 50V 1200P	1	
C7318		VCEA0JAC221J	E.CAPACITOR 6.3V 220U	1	
C7319		ECQP1H122JZ	P.CAPACITOR 50V 1200P	1	
C7320		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7321		VCEA0JAC470J	E.CAPACITOR 6.3V 47U	1	
C7322		ECQP1H681JZ	P.CAPACITOR 50V 680P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7323		ECEA1CPB100	E. CAPACITOR 16V 10U	1	
C7324		VCEA1CAC470	E. CAPACITOR 16V 47U	1	
C7325,26		ECEA1CPB100	E. CAPACITOR 16V 10U	2	
C7327,28		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	2	
C7329,30		VCEA1CAC470	E. CAPACITOR 16V 47U	2	
C7331		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7332,33		ECEA1CPK100J	E. CAPACITOR 16V 10U	2	
C7334,35		ECUX1H222KBN	CHIP 50V 2200P	2	
C7336		ECEA1CPK100J	E. CAPACITOR 16V 10U	1	
C7337,38		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7339		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7340-42		ECUX1H103ZFN	CHIP 50V 0.01U	3	
C7343		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7344		ECEA1CK330	E. CAPACITOR 16V 33U	1	
C7345-47		ECUX1H103ZFN	CHIP 50V 0.01U	3	
C7348		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7901,02		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7903		ECEA1CK330	E. CAPACITOR 16V 33U	1	
C7904		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7905		ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7906,07		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7908,09		ECEA1HKR47	E. CAPACITOR 50V 0.47U	2	
C7910,11		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7912		ECUX1H180JCN	CHIP 50V 18P	1	
C7913		ECUX1H560JCN	CHIP 50V 56P	1	
C7914		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7915		ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C7916		ECUX1H180JCN	CHIP 50V 18P	1	
C7917,18		ECUX1H103ZFN	CHIP 50V 0.01U	2	
C7919,20		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	2	
C7921,22		ECUM1H221JN	C. CAPACITOR CH 50V 220P	2	
C7923-25		ECUX1H150JCN	CHIP 50V 15P	3	
C7926		ECUX1H180JCN	CHIP 50V 18P	1	
C7927		ECUX1H560JCN	CHIP 50V 56P	1	
C7928		ECUX1H180JCN	CHIP 50V 18P	1	
C7929		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7930		ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C7931		ECUX1H103ZFN	CHIP 50V 0.01U	1	
C7932,33		ECQV1H104JZ	P. CAPACITOR 50V 0.1U	2	
C7940,41		ECRHA020D41	TRIMMER	2	
D7301		MA151WK	DIODE	1	
D7302		MA151A	DIODE	1	
D7303		MA151WA	DIODE	1	
D7304		MA28W	DIODE	1	
D7305		MA151WK	DIODE	1	
D7306		MA151WA	DIODE	1	
D7307		MA151A	DIODE	1	
D7901		MA3110L	DIODE	1	
FL7301-05		VLF0634	FILTER	5	
FL7306-08		VLF0630	FILTER	3	
FL7309-13		VLF0632	FILTER	5	
FL7314		VLF0634	FILTER	1	
FL7315,16		VLF0701	FILTER	2	
FL7901,02		VLF0634	FILTER	2	
IC7301		TC6011N	IC	1	
IC7302		TC5563APL	IC	1	
IC7303		TD6710AN	IC	1	
IC7304		AN6572	IC	1	
IC7305,06		M5201L	IC	2	
IC7901		TA8662N	IC	1	
L7301,02		VLP0054	COIL	2	
L7303,04		VLP0053	COIL	2	
L7901,02		VLQEL05F821K	COIL 820UH	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P7301		VJP1232T	CONNECTOR(MALE) 5P	1	
P7302		VJP1238T	CONNECTOR(MALE) 11P	1	
Q7301		2SC1317	TRANSISTOR	1	(Q,R,S,T)
Q7302		2SB709	TRANSISTOR CHIP	1	(Q,R)
Q7303,04		2SD1328	TRANSISTOR CHIP	2	(S,T)
Q7305		2SB709	TRANSISTOR CHIP	1	
Q7307		2SB709	TRANSISTOR CHIP	1	
Q7901		2SC1317	TRANSISTOR	1	(Q,R,S,T)
QR7301		UN2211	TRANSISTOR-RESISTOR	1	
QR7302		UN2212	TRANSISTOR-RESISTOR	1	
QR7303		UN2112	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R7301-06		ERJ6GEYJ473	CHIP 1/10W 47K	6	
R7307		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R7308,09		ERJ6GEYJ331	CHIP 1/10W 330	2	
R7310		ERJ6GEYJ683	CHIP 1/10W 68K	1	
R7311,12		ERJ6GEYJ333	CHIP 1/10W 33K	2	
R7313,14		ERJ6GEYJ472	CHIP 1/10W 4.7K	2	
R7315		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R7316		ERJ6GEYJ391	CHIP 1/10W 390	1	
R7317		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R7318		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R7319		ERJ6GEYJ392	CHIP 1/10W 3.9K	1	
R7320		ERJ6GEYJ391	CHIP 1/10W 390	1	
R7321		ERJ6GEYJ222	CHIP 1/10W 2.2K	1	
R7322		ERJ6GEYJ103	CHIP 1/10W 10K	1	
R7323,24		ERJ6GEYJ473	CHIP 1/10W 47K	2	
R7325		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R7326		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R7327		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R7328,29		ERJ6GEYJ272	CHIP 1/10W 2.7K	2	
R7330		ERJ6GEYJ472	CHIP 1/10W 4.7K	1	
R7331,32		ERJ6GEYJ104	CHIP 1/10W 100K	2	
R7333,34		ERJ6GEYJ272	CHIP 1/10W 2.7K	2	
R7335		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R7336,37		ERJ6GEYJ473	CHIP 1/10W 47K	2	
R7338		ERJ6GEYJ152	CHIP 1/10W 1.5K	1	
R7339		ERJ6GEYJ822	CHIP 1/10W 8.2K	1	
R7340		ERJ6GEYJ562	CHIP 1/10W 5.6K	1	
R7341		ERJ6GEYJ124	CHIP 1/10W 120K	1	
R7342-47		ERJ6GEYJ101	CHIP 1/10W 100	6	
R7350,51		ERJ6GEYJ473	CHIP 1/10W 47K	2	
R7352-54		ERJ6GEYJ682	CHIP 1/10W 6.8K	3	
R7355		ERJ6GEYJ223	CHIP 1/10W 22K	1	
R7901		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7902		ERJ6GEYJ224	CHIP 1/10W 220K	1	
R7903		ERJ6GEYJ154	CHIP 1/10W 150K	1	
R7904		ERJ6GEYJ391	CHIP 1/10W 390	1	
R7905		ERJ6GEYJ393	CHIP 1/10W 39K	1	
R7906,07		ERJ6GEYJ102	CHIP 1/10W 1K	2	
R7908		ERJ6GEYJ471	CHIP 1/10W 470	1	
R7909		ERJ6GEYJ393	CHIP 1/10W 39K	1	
VR7301,02		EVN38CA00B53	V.RESISTOR 5K	2	
X7301		VSX0294	CRYSTAL OSCILLATOR	1	
X7901		VSX0292	CRYSTAL OSCILLATOR	1	
X7902		VSX0291	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VSC2616	SHIELD CASE	1	
		VSC2617	SHIELD CASE	1	
	■	VEP07509C	TIMER C.B.A.		NV-FS1B(NLA)
		VEP07509D			NV-FS1EB(NLA)
P7507		VJP1244T	CONNECTOR 4P	1	NV-FS1EB
			CAPACITORS		
C6701		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6702		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C6703		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6704		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C7501		ECCF1H080DC	C.CAPACITOR 50V 8P	1	
C7502		ECRHA030E41	TRIMER 30P	1	
C7503		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C7504		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C7505		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C7507		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7510		ECEA1HK220	E.CAPACITOR 50V 22U	1	
C7511		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7512		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7514		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C7515		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7520		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7523		ECCF1H680JC	C.CAPACITOR 50V 68P	1	
C7524-26		ECKF1H101KB	C.CAPACITOR 50V 100P	3	
C7527		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C7586		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C7588		ECKF1H331KB	C.CAPACITOR 50V 330P	1	
D6701		PN323B	PHOTO DIODE	1	
D7501		11ES1	DIODE	1	
D7502		MA165	DIODE	1	
D7503		MA4075	DIODE	1	
D7506-13		MA165	DIODE	8	
D7517,18		LN81RCPHL	LED	2	
D7519,20		LN31GCPHLMU	LED	2	
D7521		MA165	DIODE	1	NV-FS1B
D7522		MA165	DIODE	1	
D7524,25		MA165	DIODE	2	NV-FS1B
D7526		MA165	DIODE	1	
D7527		MA165	DIODE	1	NV-FS1EB
D7529		MA165	DIODE	1	
D7532		MA165	DIODE	1	NV-FS1B
D7534,35		MA165	DIODE	2	
D7538		MA165	DIODE	1	
D7540		MA165	DIODE	1	
DP7501		VSL0113	DISPLAY TUBE	1	
IC6701		UPC1490HA	IC	1	
IC7501		MN15283VPY	IC	1	
IC7502		MN1226	IC	1	
IC7504		MN1280P	IC	1	
IC7505		MN1280T	IC	1	
L7501		VLQEL05F221K	COIL 220UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P7501		VJP1251T	CONNECTOR(MALE) 11P	1	
P7502		VJS1937	CONNECTOR (FEMALE)	1	
P7503		VJP1239T	CONNECTOR(MALE) 12P	1	
P7504,05		VJP1247T	CONNECTOR(MALE) 7P	2	
P7506		VJS1491	CONNECTOR(FEMALE)	1	
P7508		VJP1242T	CONNECTOR(MALE) 2P	1	
Q7501		2SD637	TRANSISTOR	1	(Q,R,S)
QR7502		UN1213	TRANSISTOR-RESISTOR	1	
QR7503		UN1112	TRANSISTOR-RESISTOR	1	
QR7505		UN1113	TRANSISTOR-RESISTOR	1	
QR7506		UN1213	TRANSISTOR-RESISTOR	1	
QR7507		UN1113	TRANSISTOR-RESISTOR	1	
QR7511		UN1213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6701		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6702		ERDS2TJ8R2	C.RESISTOR 1/4W 8.2	1	
R7501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R7503		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R7507		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R7508		ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R7509		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7510		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R7511,12		ERDS2TJ473	C.RESISTOR 1/4W 47K	2	
R7515		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7520-22		ERDS2TJ103	C.RESISTOR 1/4W 10K	3	
R7523		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7530-34		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	5	
R7535		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7536		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7537		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7538		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R7548		ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R7549		ERDS1TJ8R2	C.RESISTOR 1/2W 8.2	1	
VR6701		EVMLGGA00B15	V.RESISTOR 100K	1	
VR7501		EWANYDX05J54	V.RESISTOR 50K	1	
X7501		VSX0140	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0412	LEVEL METER HOLDER	1	
		VJF0398	FIP HOLDER	1	
		VGU3436	REC VOLUM KNOB	2	
		VGQ1189	REC VOLUM LEVER	2	
		VGQ1188	REC VOLUM SLIDE PLATE	1	
		KL04	LED HOLDER	2	
		VMD0504		2	
	■	VEP01274F	POWER C.B.A.		(NLA)
			CAPACITORS		
C1001-04		VCK0043	CAPACITOR 1000P	4	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1005-08		VCK0045	C. CAPACITOR 250V 1500P	4	
C1009		ECQU2A104MN	P. CAPACITOR 250V 0.100U	1	
C1010		ECOS2GU101F	E. CAPACITOR 400V 100U	1	
C1011		ECQE6473MZ	P. CAPACITOR 630V 0.047U	1	
C1012		ECEA1CGE470	E. CAPACITOR 16V 47U	1	
C1013		ECQB1H472KH	P. CAPACITOR 50V 4700P	1	
C1014		ECQV1H474JZ	P. CAPACITOR 50V 0.47U	1	
C1018		ECEA1HGE101	E. CAPACITOR 50V 100U	1	
C1019,20		ECEA1PGE222Y	E. CAPACITOR 18V 2200U	2	
C1021		ECEA1CGE100	E. CAPACITOR 16V 10U	1	
C1022		ECEA1HGE470	E. CAPACITOR 50V 47U	1	
C1023		ECEA1EGE102	E. CAPACITOR 25V 1000U	1	
C1024		ECEA0JFE102X	E. CAPACITOR 6.3V 1000U	1	
C1027		ECKD3D151KB	C. CAPACITOR 2KV 150P	1	
C1030		ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C1031,32		VCK0045	C. CAPACITOR 250V 1500P	2	
C1033,34		VCK0043	CAPACITOR 1000P	2	
C1035,36		VCK0045	C. CAPACITOR 250V 1500P	2	
C1037		ECQU2A224MN	P. CAPACITOR 250V 0.22U	1	
C1038		VCK0045	C. CAPACITOR 250V 1500P	1	
C1039		ECEA1CGE470	E. CAPACITOR 16V 47U	1	
C1040		ECQP1101JZ	P. CAPACITOR 125V 100P	1	
C1041		ECQB1H223JH	P. CAPACITOR 50V 0.022U	1	
C1042		ECKF1H103ZF	C. CAPACITOR 50V 0.01U	1	
C1044		ECEA1HGE101	E. CAPACITOR 50V 100U	1	
C1045		ECEA1AGE470	E. CAPACITOR 10V 47U	1	
C1046		ECQB1H223JH	P. CAPACITOR 50V 0.022U	1	
D1001		S1WBA60	DIODE	1	
D1002		AP01C	DIODE	1	
D1003-05		MA178	DIODE	3	
D1007,08		MA185	DIODE	2	
D1010		ERD32-01	DIODE	1	
D1012		MA4130L	DIODE	1	
D1013		MA185	DIODE	1	
D1015		ERC81-004	DIODE	1	
D1016		AK04V2	DIODE	1	
D1024,25		MA178	DIODE	2	
D1026		MA4100H	DIODE	1	
D1027		ERD32-01	DIODE	1	
D1029		ENB461D-05A	SURGE ABSORBER 460V	1	
D1030		MA4082	DIODE	1	
D1031		AK04V2	DIODE	1	
D1032		ERA22-10	DIODE	1	
IC1001		STK5339	IC	1	
L1001		ELF18D428	COIL	1	
L1002,03		ELC07D220	COIL 22U	2	
P1001		VJS1964	CONNECTOR (FEMALE)	1	
Q1001		STR16006	TRANSISTOR	1	
Q1004		2SD638	TRANSISTOR	1	(Q,R,S)
Q1011		2SB643	TRANSISTOR	1	(Q)
Q1012		2SD958	TRANSISTOR	1	
Q1013		2SB788	TRANSISTOR	1	
			RESISTORS		
R1002		ERF2AK2R2	W.RESISTOR 2W 2.2	1	
R1003-06		ERDS2TJ474	C.RESISTOR 1/4W 470K	4	
R1007		ERG3SJ683	METAL OXIDE 3W 68K	1	
R1008		ERW2PKR39	WIRE WOUND 2W 0.39	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1009		ERG1SJ181	M.RESISTOR 1W 180	1	
R1012		ERQ12HJ6R8P	FUSE 1/2W 6.8	1	
R1014		ERD2FCJ4R7	C.RESISTOR 2W 4.7	1	
R1016		ERX12ANJ2R2	M.RESISTOR 1/2W 2.2	1	
R1017		ERG12ANJ332	M.RESISTOR 1/2W 3.3K	1	
R1025		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1028		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1029,30		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R1031		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R1032		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1033		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R1034		ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R1035		ERW2PKR39	WIRE WOUND 2W 0.39	1	
R1036		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R1037		ERC12GM334	S.RESISTOR 1/2W 330K	1	
T1001		VLT0508	TRANSFORMER	1	
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	4	<!>
		VSC1831	SHIELD PLATE	1	
	■	VEP66039C	DIGITAL SCANNER C.B.A.		(NLA)
			CAPACITORS		
C01		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C02		ECEV1HAN010R	E.CAPACITOR 50V 1U	1	
C03,04		ECUX1E104ZFM	CHIP 25V 0.1U	2	
C05		ECSE1CY105ZR	TANTALUM 16V 1U	1	
C06		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C07,08		ECUX1H330JCN	CHIP 50V 33P	2	
C09-12		ECUX1H103ZFN	CHIP 50V 0.01U	4	
D01		MA151WK	DIODE	1	
D04		MA151WK	DIODE	1	
D05		MA153	DIODE	1	
D06		SE303ACY	DIODE	1	
IC01		MN158453VPB	IC	1	
IC02		UPC324G2	IC	1	
IC03		RC78L02UAA1	IC	1	
L01		ELT3K017B	COIL	1	
LCD01		VSL0131	LCD	1	
Q01,02		2SB710	TRANSISTOR CHIP	2	(Q,R,S)
Q03		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q05		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
QR04		FA1L4Z	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R01		ERJ6GMYJ560	CHIP 1/10W 56	1	
R02		ERJ6GMYJ102	CHIP 1/10W 1K	1	
R03		ERJ6GMYJ153	CHIP 1/10W 15K	1	
R04		ERJ6GMYJ332	CHIP 1/10W 3.3K	1	
R05		ERJ6GMYJ202	CHIP 1/10W 2K	1	
R06		ERJ6GMYJ244	CHIP 1/10W 240K	1	
R07		ERJ6GMYJ162	CHIP 1/10W 1.6K	1	
R08		ERJ6GMYJ224	CHIP 1/10W 220K	1	
R09		ERJ6GMYJ474	CHIP 1/10W 470K	1	
R10		ERJ6GMYK106	CHIP 1/10W 10M	1	
R11		ERJ6GMYJ105	CHIP 1/10W 1M	1	
R12		ERJ6GMYK106	CHIP 1/10W 10M	1	
R13		ERJ6GMYJ361	CHIP 1/10W 360	1	
R14		ERJ6GMYJ682	CHIP 1/10W 6.8K	1	
R15		ERJ6GMYJ332	CHIP 1/10W 3.3K	1	
R16,17		ERJ6GMYJ682	CHIP 1/10W 6.8K	2	
R18		ERJ8GCYJ120	CHIP 1/8W 12	1	
R19		ERJ6GMYJ474	CHIP 1/10W 470K	1	
R21		ERJ6GMYJ474	CHIP 1/10W 470K	1	
R23		ERJ6GMYJ682	CHIP 1/10W 6.8K	1	
R24		ERJ6GMYJ102	CHIP 1/10W 1K	1	
R29		ERJ8GCYJ150	CHIP 1/8W 15	1	
SN01		VSQ0567	SENSOR	1	
SW01		VSS0126	SWITCH	1	
SW02		EVQQFV02K	SWITCH	1	
VR09		EVND4KA00B35	V.RESISTOR 300K	1	
X01		VSX0246	CRYSTAL OSCILLATOR	1	
X02		EFBAL30D001K	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMX1324	LCD SPACER	1	
	■	VEP66030A	REMOTE CONTROLLER C.B.A.		(NLA)
			CAPACITORS		
C1		ECEA0GKS101	E.CAPACITOR 4V 100U	1	
C2,C3		ECKF1H121KB	C.CAPACITOR 50V 120P	2	
C4		ECQB1H222KH	P.CAPACITOR 50V 2200P	1	
D1		LN66S	LED	1	
D2-D9		MA165	DIODE	8	
IC1		MN6011M	IC	1	
QR1		UN1231	TRANSISTOR-RESISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1		ERDS2TJ1R0	C.RESISTOR 1/4W 1.0	1	
X1		VSX0201	CRYSTAL OSCILLATOR	1	
	■	VEP00N22A	CYLINDER DRIVE C.B.A.		(NLA)
			CAPACITORS		
C2901-03		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	3	
C2904-06		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	3	
C2907		ECUM1E683KBM	C.CAPACITOR CH 25V 0.068U	1	
C2908		ECUM1E473KBM	C.CAPACITOR CH 25V 0.047U	1	
C2909		ECQV1H104JS	P.CAPACITOR 50V 0.1U	1	
C2910,11		ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C2912		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
IC2901		AN3814K	IC	1	
P2901		VJP1927	CONNECTOR (MALE)	1	
P2902		VJP1232T	CONNECTOR(MALE) 5P	1	
P2903		VJP1231T	CONNECTOR(MALE) 4P	1	
			RESISTORS		
R2901		ERX12ANJR68	METAL OXIDE 1/4W 0.68	1	
	■	VEP00K88C	FE HEAD C.B.A.		(NLA)
			CAPACITORS		
		ECEA1CK100	E.CAPACITOR 16V 10U	1	
		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
		EXED103Z333T	C & R	1	
		VLQEL05R101K	COIL 100UH	1	
		VJP1148	CONNECTOR	1	
		2SD636	TRANSISTOR	1	(R)
	■	EIQ7QF012Q	COIL		
	■	VEK3354	MECHANISM CONNECTION UNIT		(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P1504		VJP2082	CONNECTOR(MALE) 13P	1	
P1505		VJP1242T	CONNECTOR(MALE) 2P	1	
R1501		ERJ8GCYJ223	CHIP 1/8W 22K	1	
	■	VEK3555	REEL SENSOR UNIT		(NLA)
IC1501		ON2170	PHOTO CUPLUR	1	
P1506		VJP1242T	CONNECTOR 2P	1	
	■	VXA2983	LED UNIT		(NLA)
D1501		GL450	PHOTO DIODE	1	
			MISCELLANEOUS		
		VMD0911	LED HOLDER	1	
	■	VEP00H35A	PHOTO TR.(T) C.B.A.		(NLA)
Q1501		PN150NV	PHOTO TRANSISTOR	1	
C1501		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
			MISCELLANEOUS		
		VMD0645	PHOTO TRANSISTOR HOLDER	1	
	■	VEP00K27A	PHOTO TR.(S) C.B.A.		(NLA)
C1502		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
P1503		VJS1936	CONNECTOR(FEMALE)	1	
P1508		VJP1242T	CONNECTOR(MALE) 2P	1	
Q1502		PN150NV	PHOTO TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	PHOTO TRANSISTOR HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks